EXHIBIT K

Exhibit A-29
Invalidity Claim Chart for U.S. Patent No. 7,924,802 vs. U.S. Patent No. 6,359,868

U.S. Patent No. 6,359,868 ("Chen-868") was filed on October 10, 2000 and issued on March 19, 2002. Chen-868 anticipates asserted claims 1–4, 6–10, 13, 14, 17, and 21–24 of U.S. Patent No. 7,924,802 ("the '802 Patent") under 35 U.S.C. § 102. Chen-868 also renders obvious asserted claims 1–4, 6–10, 13, 14, 17, and 21–24 of the '802 Patent under 35 U.S.C. § 103, alone based on the state of the art and/or in combination with one or more other references identified in Exs. A-1–A-31, Cover Pleading, and First Supplemental Ex. A-Obviousness Chart.[1]

To the extent Plaintiff alleges that Chen-868 does not disclose any particular limitation of the asserted claims in the '802 Patent, either expressly or inherently, it would have been obvious to a person of ordinary skill in the art as of the priority date of the '802 Patent to modify Chen-868 and/or to combine the teachings of Chen-868 with other prior art references, including but not limited to the present prior art references found in Exs. A-1–A-31, Cover Pleading, First Supplemental Ex. A-Obviousness Chart, and the relevant section of charts for other prior art for the '802 Patent in a manner that would render the asserted claims of these patents invalid as obvious.

With respect to the obviousness of the asserted claims of the '802 Patent under 35 U.S.C. § 103, one or more of the principles enumerated by the United States Supreme Court in *KSR v. Teleflex*, 550 U.S. 398 (2007) apply, including: (a) combining various claimed elements known in the prior art according to known methods to yield a predictable result; and/or (b) making a simple substitution of one or more known elements for another to obtain a predictable result; and/or (c) using a known technique to improve a similar device or method in the same way; and/or (d) applying a known technique to a known device or method ready for improvement to yield a predictable result; and/or (e) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success or, in other words, the solution was one which was "obvious to try"; and/or (f) a known work in one field of endeavor prompting variations of it for use either in the same field or a different field based on given design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and/or (g) a teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention. It therefore would have been obvious to one of ordinary skill in the art to combine the disclosures of these references in accordance with the principles and rationales set forth above.

[1] Samsung is investigating this prior art and has not yet completed discovery from third parties, who may have relevant information concerning the prior art, and therefore, Samsung reserves the right to supplement this chart after additional discovery is received. To the extent that any of the prior art discloses the same or similar functionality or feature(s) of any of the accused products, Samsung reserves the right to argue that said feature or functionality does not practice any limitation of any of the asserted claims, and to argue, in the alternative, that if said feature or functionality is found to practice any limitation of any of the asserted claims in the '802 Patent, then the prior art reference teaches the limitation and that the claim is not patentable.

The citations to portions of any reference in this chart are exemplary only. For example, a citation that refers to or discusses a figure or figure item should be understood to also incorporate by reference that figure and any additional descriptions of that figure as if set forth fully therein. Samsung reserves the right to rely on the entirety of the references cited in this chart to show that the asserted claims of the '802 Patent are invalid. Citations presented for one claim limitation are expressly incorporated by reference into all other limitations for that claim as well as all limitations of all claims on which that claim depends. Samsung also reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff's infringement contentions, and/or information obtained during discovery as the case progresses.

Claim 1 of the '802 Patent	**Prior Art Reference – Chen-868**
[1.1] A method of transmitting information in a wireless communication channel comprising:	To the extent the preamble is limiting, Chen-868 discloses "A method of transmitting information in a wireless communication channel comprising." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[1.2] transmitting first information across a first frequency range using a wireless transmitter, the first frequency range having a first center frequency, a first highest frequency, and a first lowest frequency; and	Chen-868 discloses "transmitting first information across a first frequency range using a wireless transmitter, the first frequency range having a first center frequency, a first highest frequency, and a first lowest frequency." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868

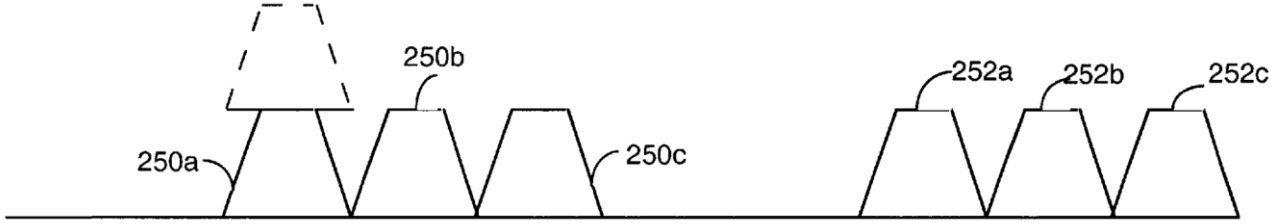


FIG. 5

See, e.g., Chen-868 at Figure 5.

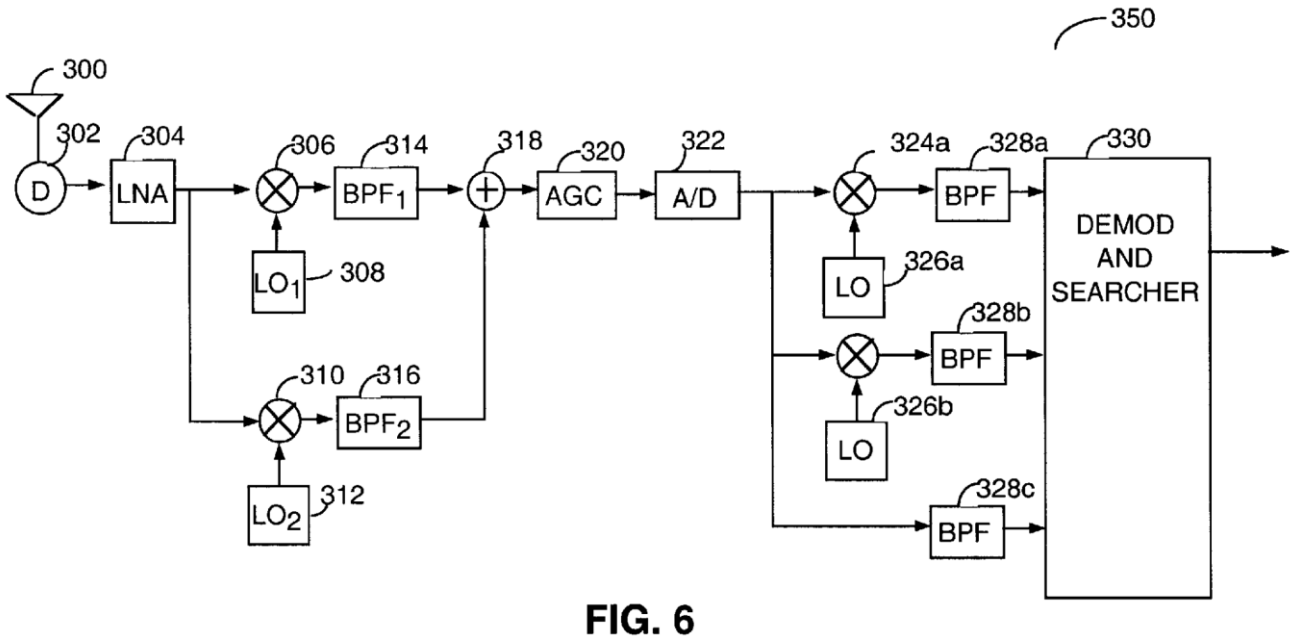


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[1.3] simultaneously transmitting second information across a second frequency range using the same wireless transmitter, the second frequency range having a second center frequency greater than the first center frequency, a second highest frequency, and a second lowest frequency.	Chen-868 discloses "simultaneously transmitting second information across a second frequency range using the same wireless transmitter, the second frequency range having a second center frequency greater than the first center frequency, a second highest frequency, and a second lowest frequency." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868

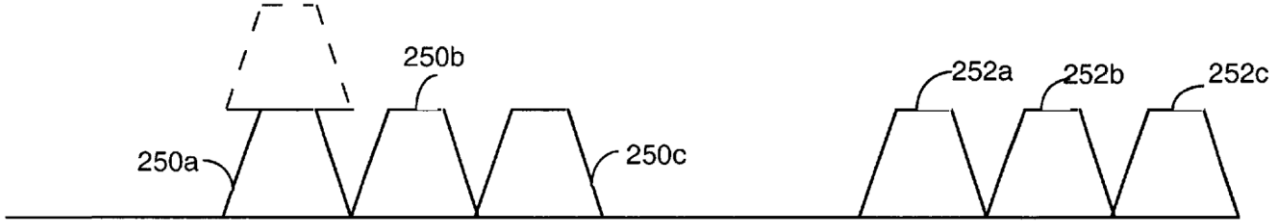


FIG. 5

See, e.g., Chen-868 at Figure 5.

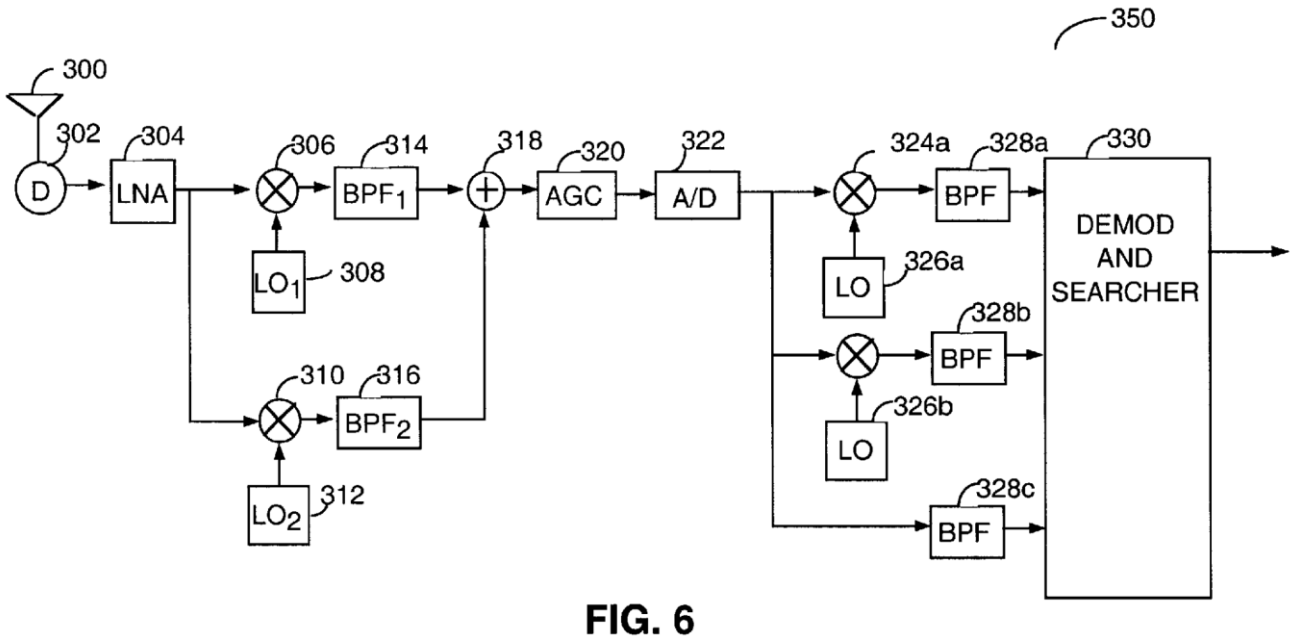


FIG. 6

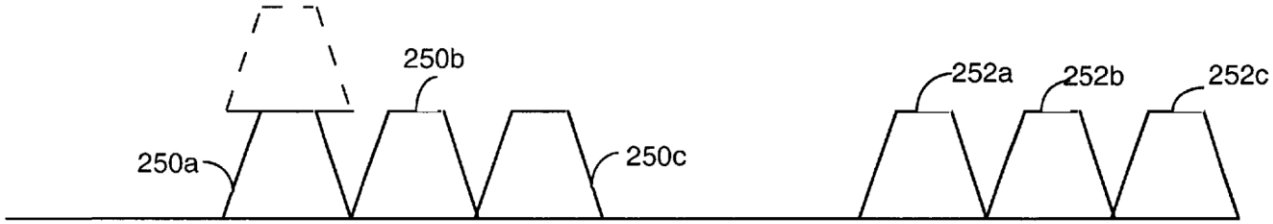
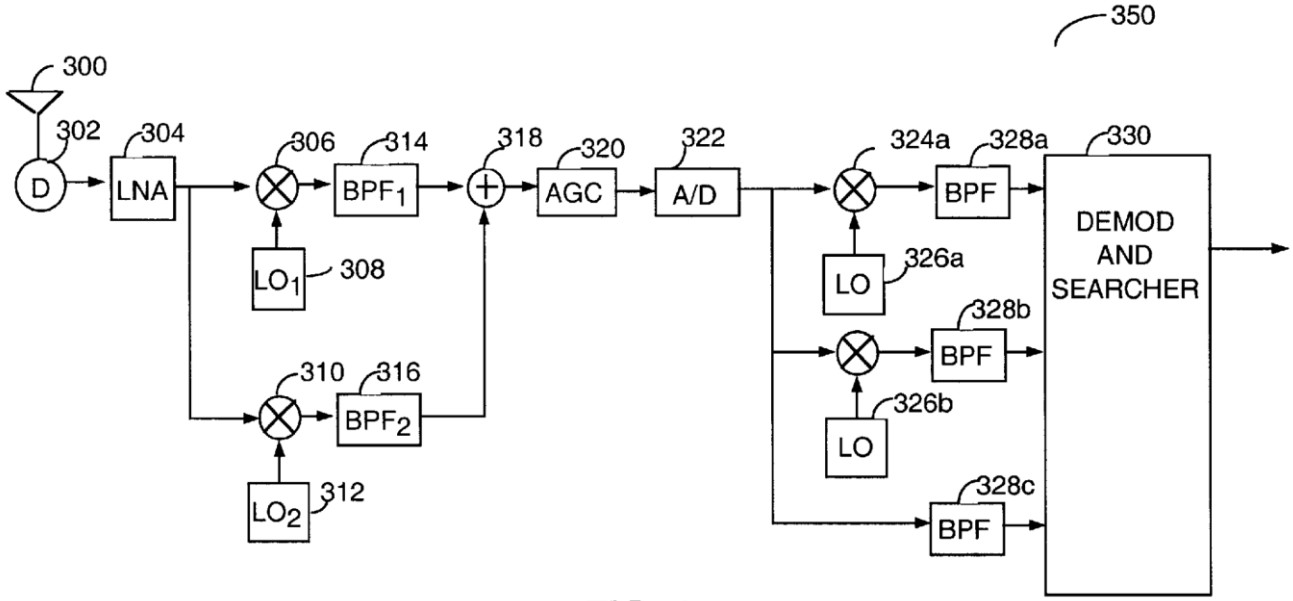
See, e.g., Chen-868 at Figure 6.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 1 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 2 of the '802 Patent	Prior Art Reference – Chen-868
[2.1] The method of claim 1	Chen-868 discloses all the elements of claim 1 for all the reasons provided above.
[2.2] wherein frequency difference between the first center frequency and the second center frequency is greater than the sum of one-half the first frequency range and one-half the second frequency range.	Chen-868 discloses "wherein frequency difference between the first center frequency and the second center frequency is greater than the sum of one-half the first frequency range and one-half the second frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station.

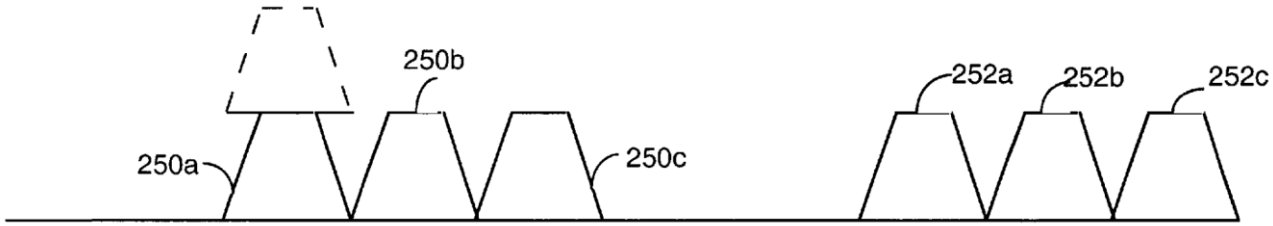
Claim 2 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Abstract.  FIG. 5 *See, e.g.*, Chen-868 at Figure 5.  FIG. 6

Claim 2 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Figure 6. FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be

Claim 2 of the '802 Patent	Prior Art Reference – Chen-868
	understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal

Claim 2 of the '802 Patent	Prior Art Reference – Chen-868
	from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 3 of the '802 Patent	Prior Art Reference – Chen-868
[3.1] The method of claim 1	Chen-868 discloses all the elements of claim 1 for all the reasons provided above.
[3.2] wherein the first and second information are transmitted using the same power amplifier in said wireless transmitter.	Chen-868 discloses "wherein the first and second information are transmitted using the same power amplifier in said wireless transmitter." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a

Claim 3 of the '802 Patent	Prior Art Reference – Chen-868
	sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  FIG. 5 *See, e.g.*, Chen-868 at Figure 5.

Claim 3 of the '802 Patent	Prior Art Reference – Chen-868

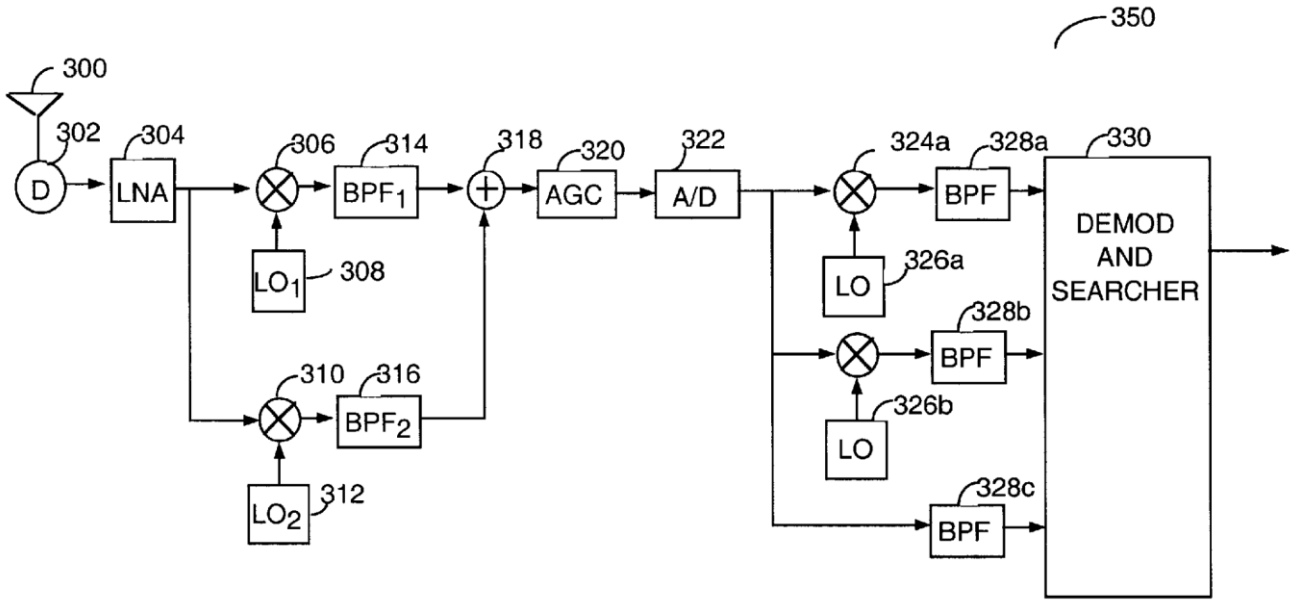


FIG. 6

See, e.g., Chen-868 at Figure 6.

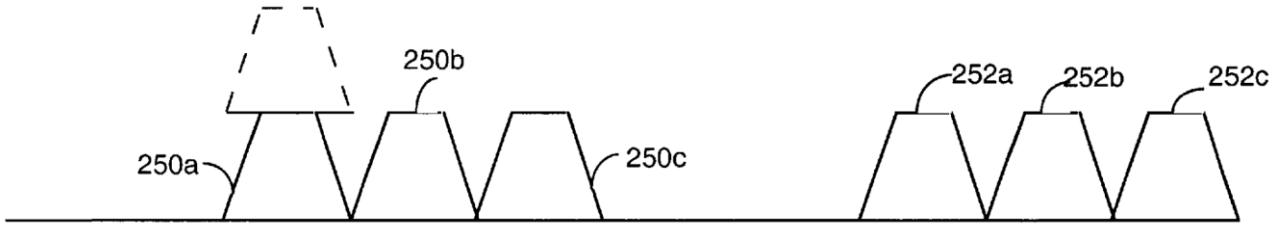
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 3 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 3 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 4 of the '802 Patent	**Prior Art Reference – Chen-868**
[4.1] The method of claim 3	Chen-868 discloses all the elements of claim 3 for all the reasons provided above.
[4.2] wherein the bandwidth of said power amplifier is greater than the difference between the first lowest frequency and the second highest frequency.	Chen-868 discloses "wherein the bandwidth of said power amplifier is greater than the difference between the first lowest frequency and the second highest frequency." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 4 of the '802 Patent	Prior Art Reference – Chen-868

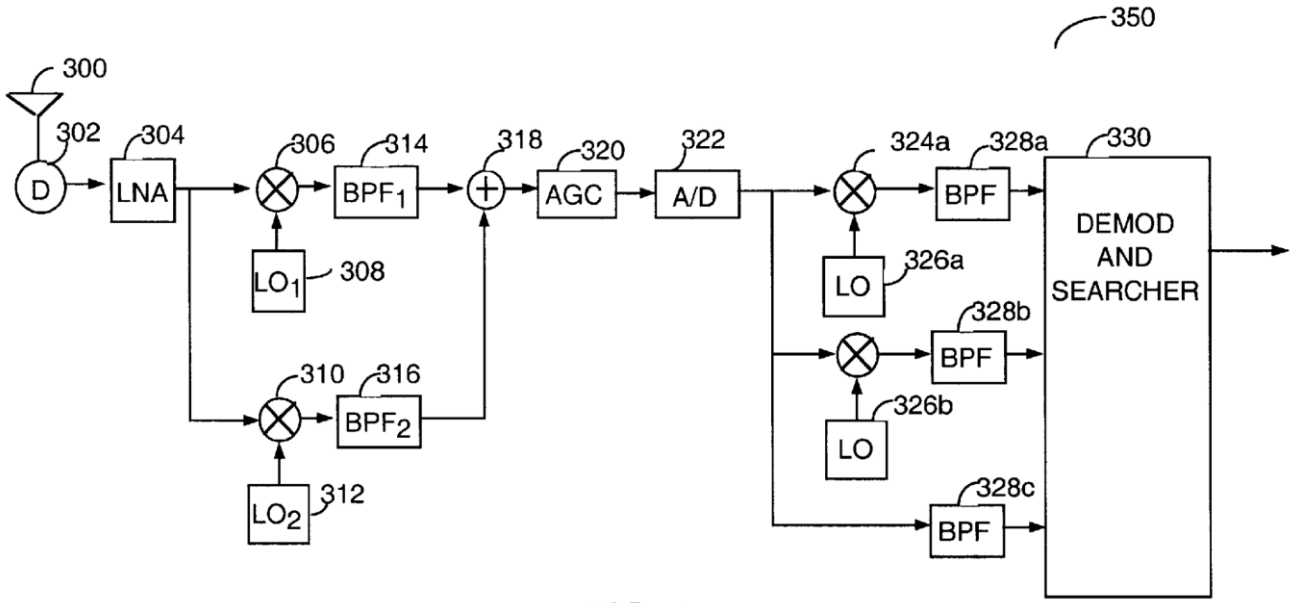


FIG. 6

See, e.g., Chen-868 at Figure 6.

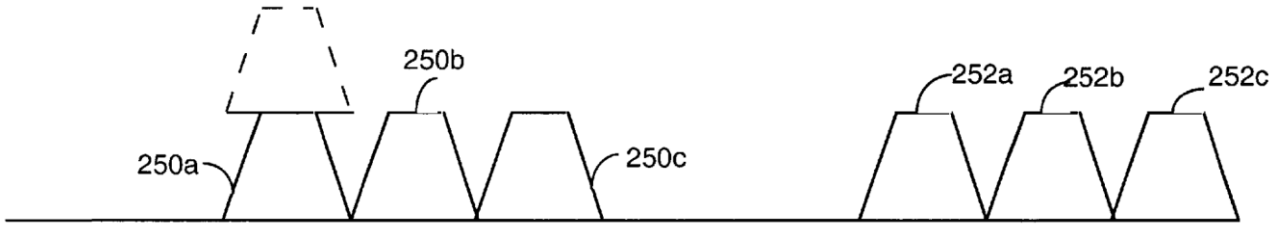
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-

Claim 4 of the '802 Patent	Prior Art Reference – Chen-868
	110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 4 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 6 of the '802 Patent	Prior Art Reference – Chen-868
[6.1] The method of claim 1	Chen-868 discloses all the elements of claim 1 for all the reasons provided above.
[6.2] wherein the first information corresponds to a first wireless protocol and the second information corresponds to a second wireless protocol.	Chen-868 discloses "wherein the first information corresponds to a first wireless protocol and the second information corresponds to a second wireless protocol." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 6 of the '802 Patent	Prior Art Reference – Chen-868

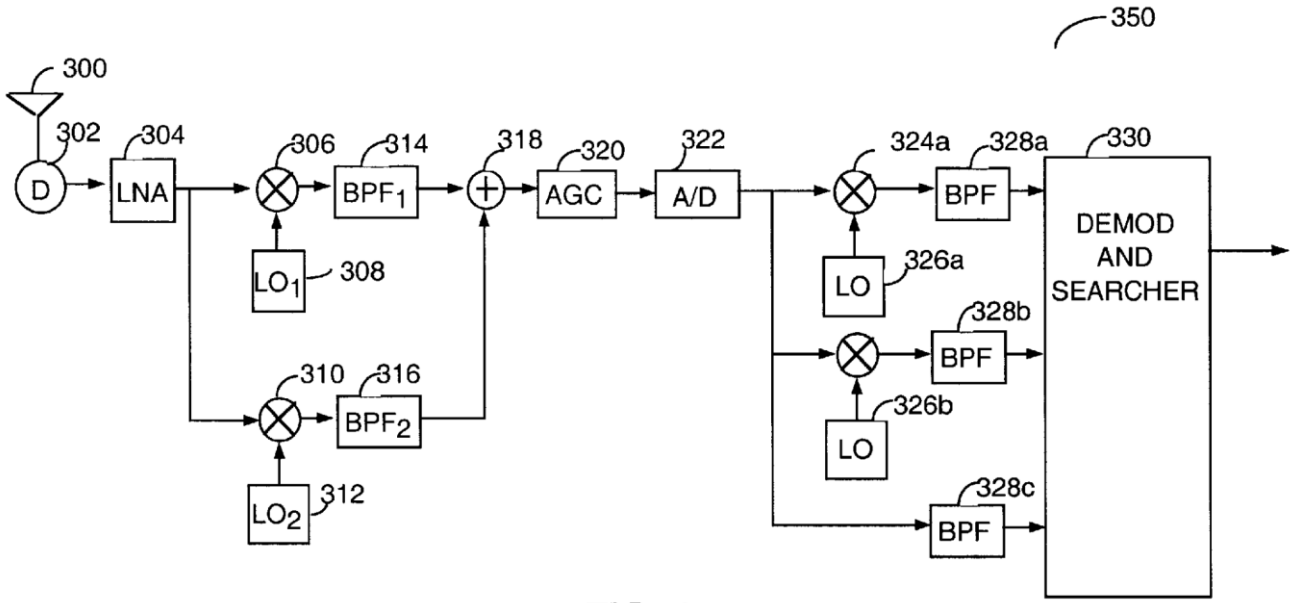


FIG. 6

See, e.g., Chen-868 at Figure 6.

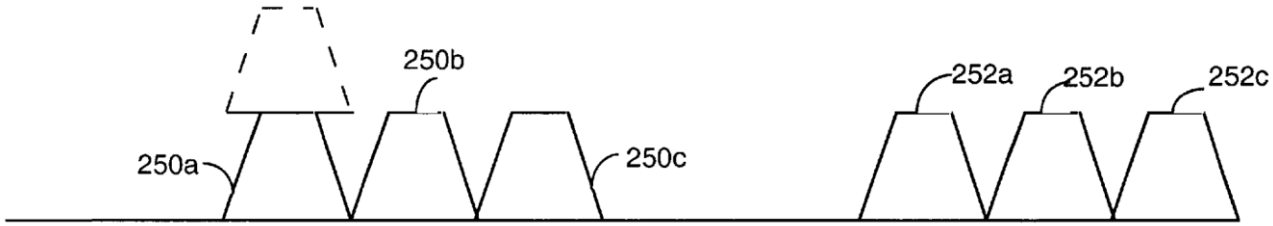
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-

Claim 6 of the '802 Patent	Prior Art Reference – Chen-868
	110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 6 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 7 of the '802 Patent	Prior Art Reference – Chen-868
[7.1] The method of claim 1	Chen-868 discloses all the elements of claim 1 for all the reasons provided above.
[7.2] wherein the first information and the second information are the same data transmitted across two different frequencies.	Chen-868 discloses "wherein the first information and the second information are the same data transmitted across two different frequencies." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 7 of the '802 Patent	Prior Art Reference – Chen-868

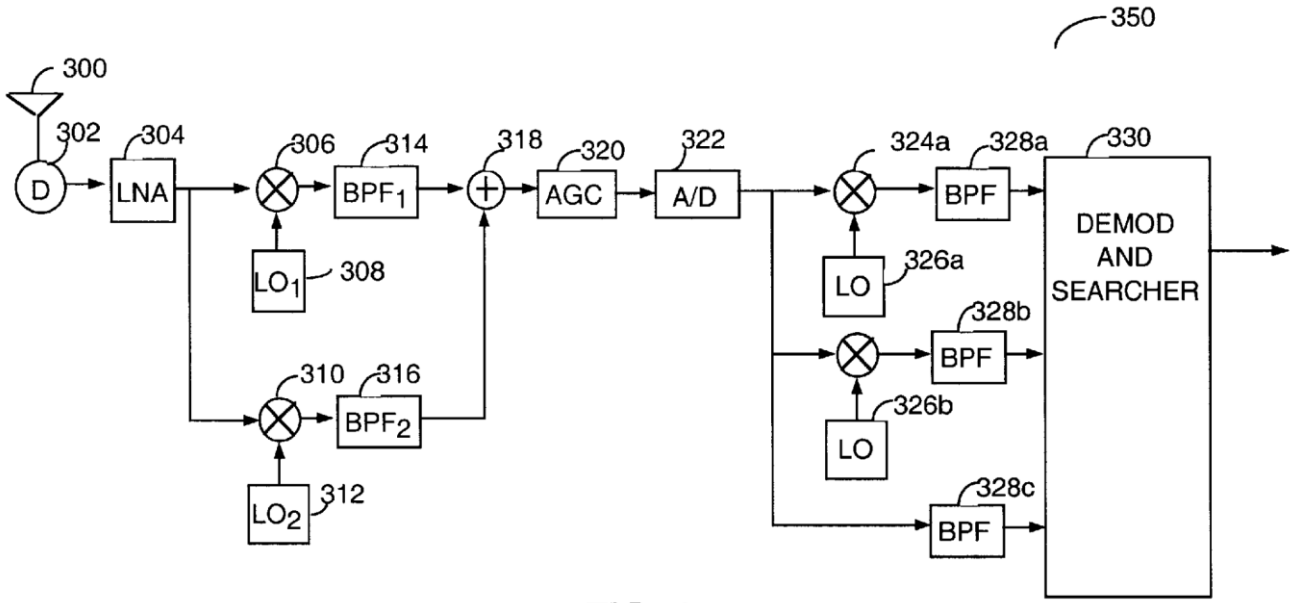


FIG. 6

See, e.g., Chen-868 at Figure 6.

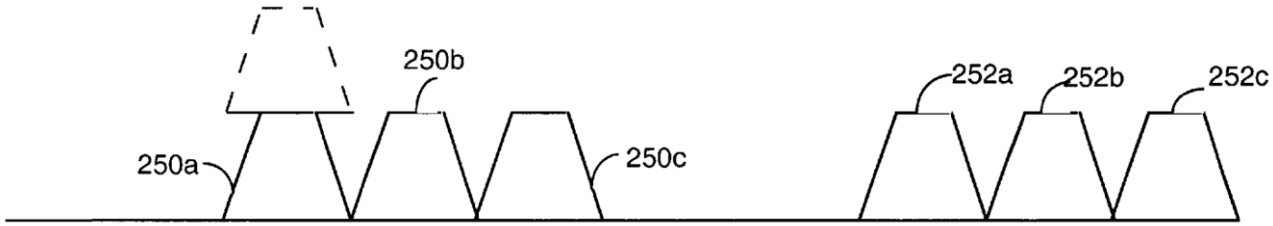
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-

Claim 7 of the '802 Patent	Prior Art Reference – Chen-868
	110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 7 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 8 of the '802 Patent	**Prior Art Reference – Chen-868**
[8.1] The method of claim 1	Chen-868 discloses all the elements of claim 1 for all the reasons provided above.
[8.2] wherein the first information and the second information are from the same data stream.	Chen-868 discloses "wherein the first information and the second information are from the same data stream." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 8 of the '802 Patent	Prior Art Reference – Chen-868

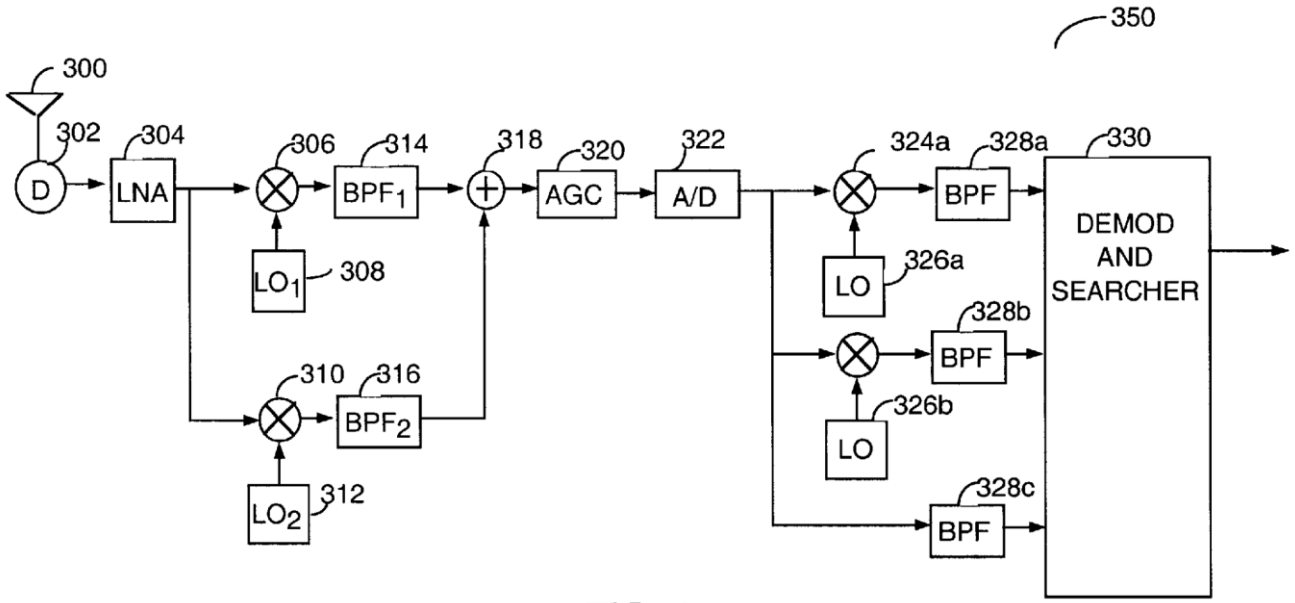


FIG. 6

See, e.g., Chen-868 at Figure 6.

FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-

Claim 8 of the '802 Patent	Prior Art Reference – Chen-868
	110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 8 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 9 of the '802 Patent	**Prior Art Reference – Chen-868**
[9.1] The method of claim 1	Chen-868 discloses all the elements of claim 1 for all the reasons provided above.
[9.2] wherein first information and second information comprise a plurality of OFDM symbols, wherein a first symbol is transmitted during a first time slot across the first frequency range and a second symbol is transmitted during the first time slot across the second frequency range, and wherein a third symbol is transmitted during a second time slot across the first frequency range and a fourth symbol is transmitted during the second time slot across a second frequency range.	Chen-868 discloses "wherein first information and second information comprise a plurality of OFDM symbols, wherein a first symbol is transmitted during a first time slot across the first frequency range and a second symbol is transmitted during the first time slot across the second frequency range, and wherein a third symbol is transmitted during a second time slot across the first frequency range and a fourth symbol is transmitted during the second time slot across a second frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 9 of the '802 Patent	Prior Art Reference – Chen-868

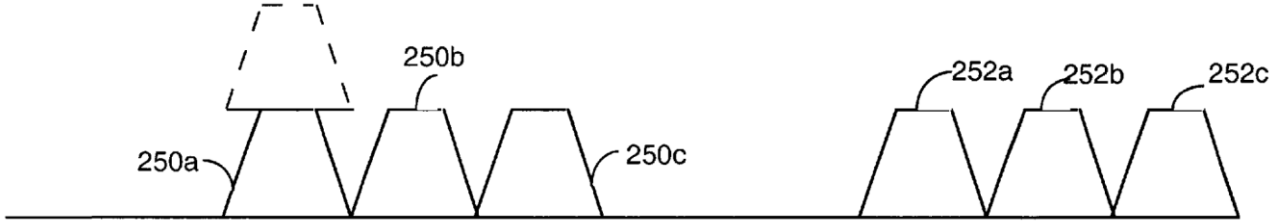


FIG. 5

See, e.g., Chen-868 at Figure 5.

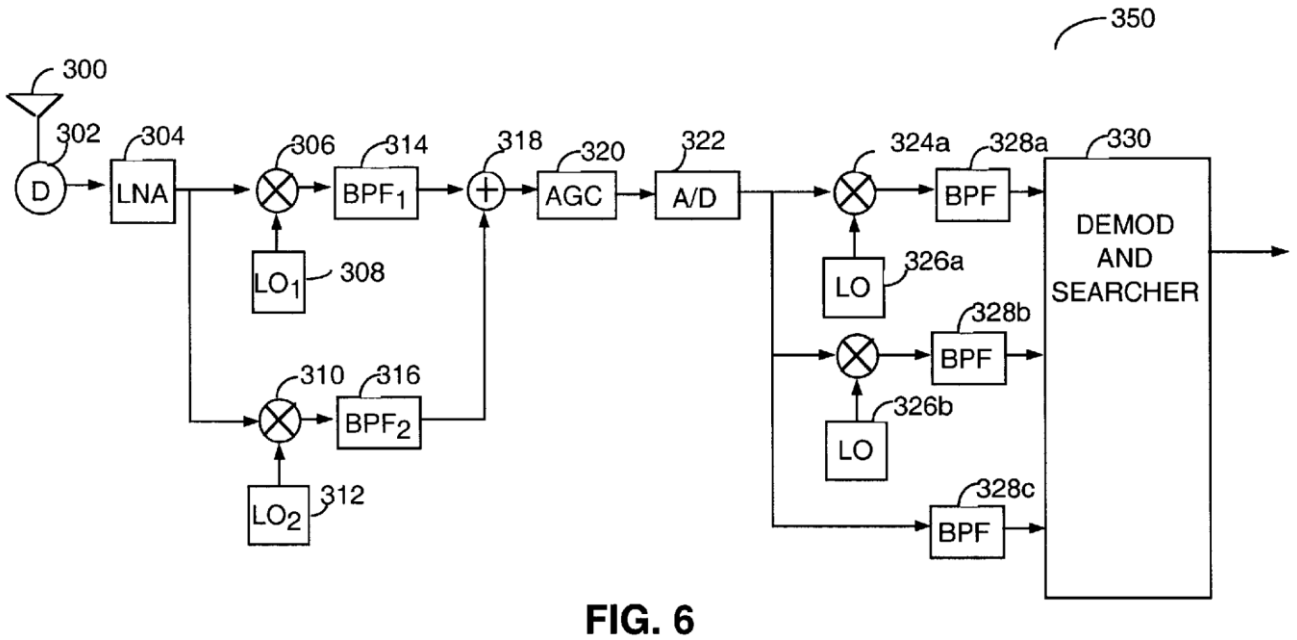


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 9 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 9 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 9 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
[10.1] A method of transmitting information in a wireless communication channel comprising:	To the extent the preamble is limiting, Chen-868 discloses "A method of transmitting information in a wireless communication channel comprising." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.2] receiving a first digital signal comprising first data to be transmitted;	Chen-868 discloses "receiving a first digital signal comprising first data to be transmitted." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

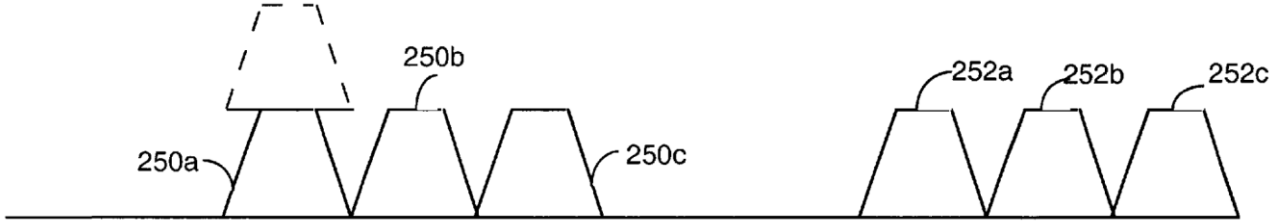


FIG. 5

See, e.g., Chen-868 at Figure 5.

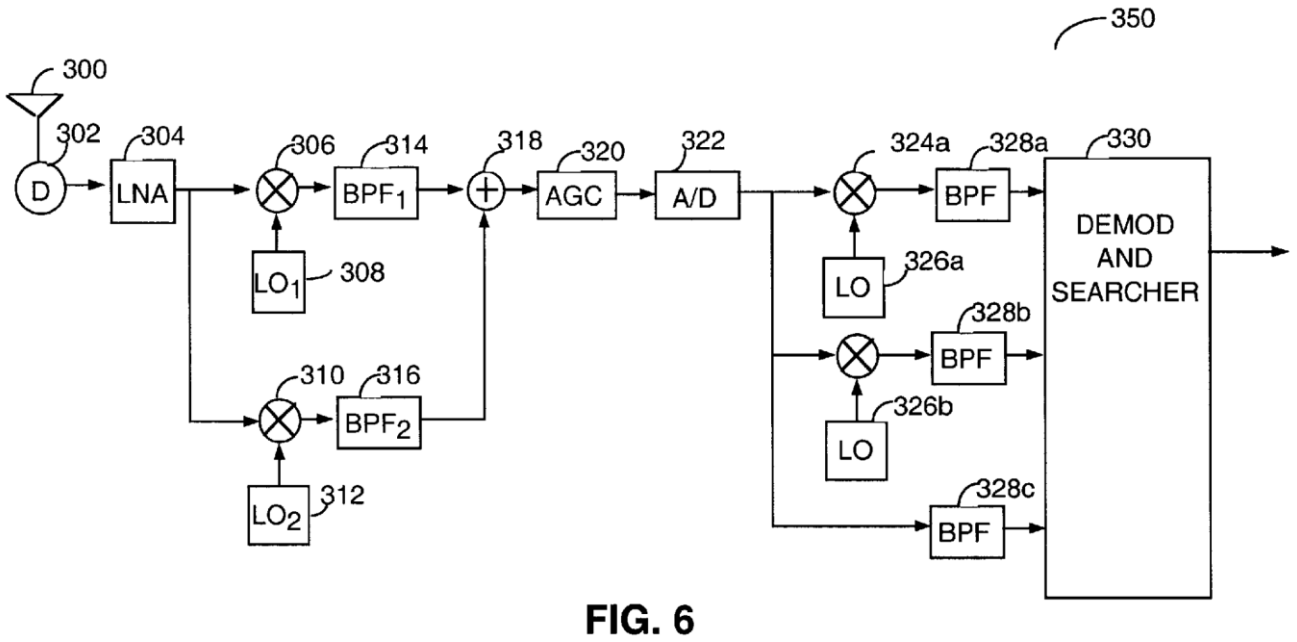


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.3] receiving a second digital signal comprising second data to be transmitted;	Chen-868 discloses "receiving a second digital signal comprising second data to be transmitted." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

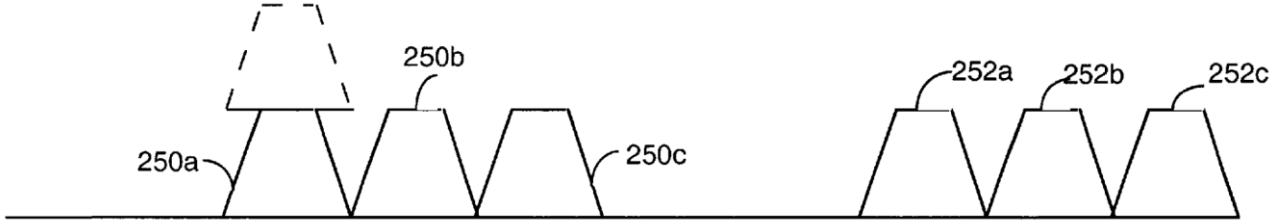


FIG. 5

See, e.g., Chen-868 at Figure 5.

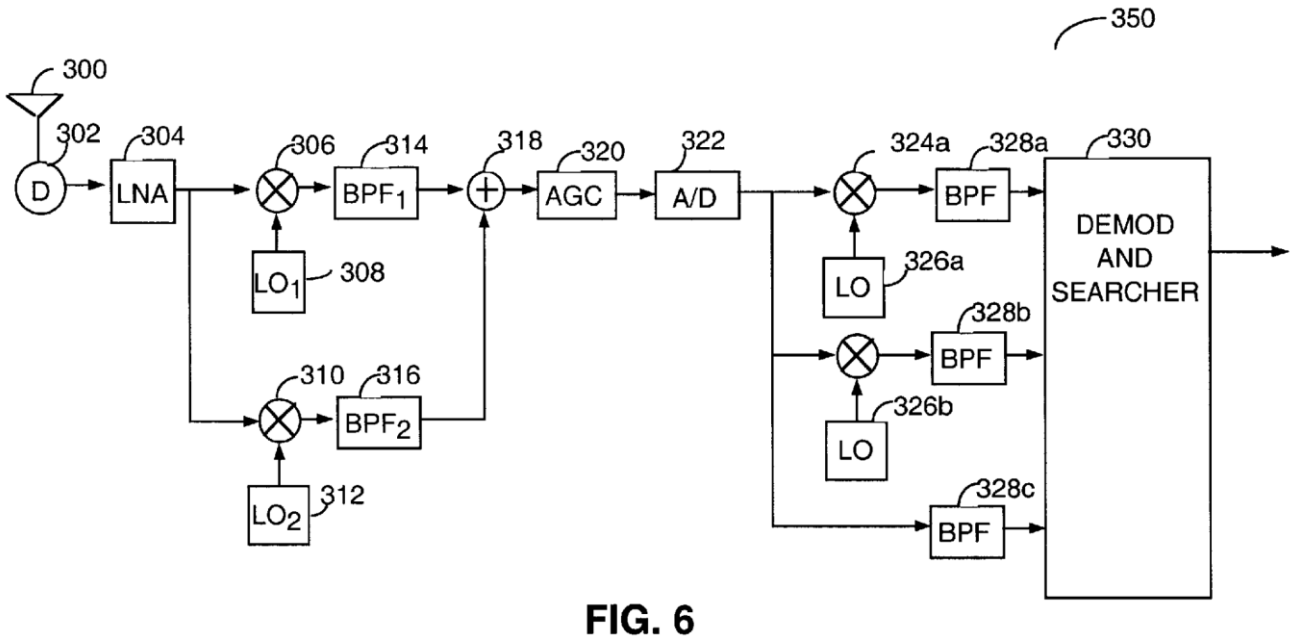


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.4] converting the first digital signal into a first analog signal using a first digital-to-analog converter, the first analog signal carrying the first data across a first frequency range;.	Chen-868 discloses "converting the first digital signal into a first analog signal using a first digital-to-analog converter, the first analog signal carrying the first data across a first frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

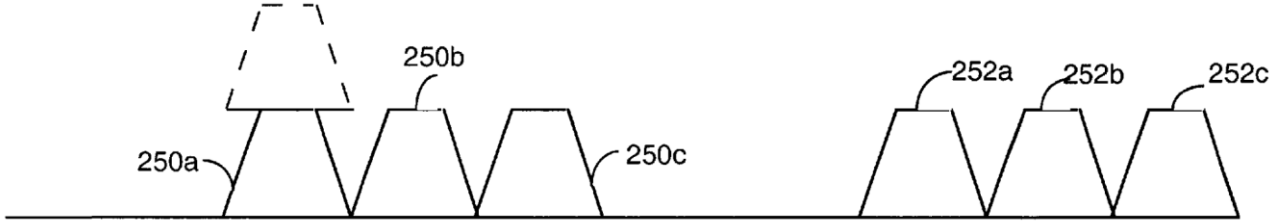


FIG. 5

See, e.g., Chen-868 at Figure 5.

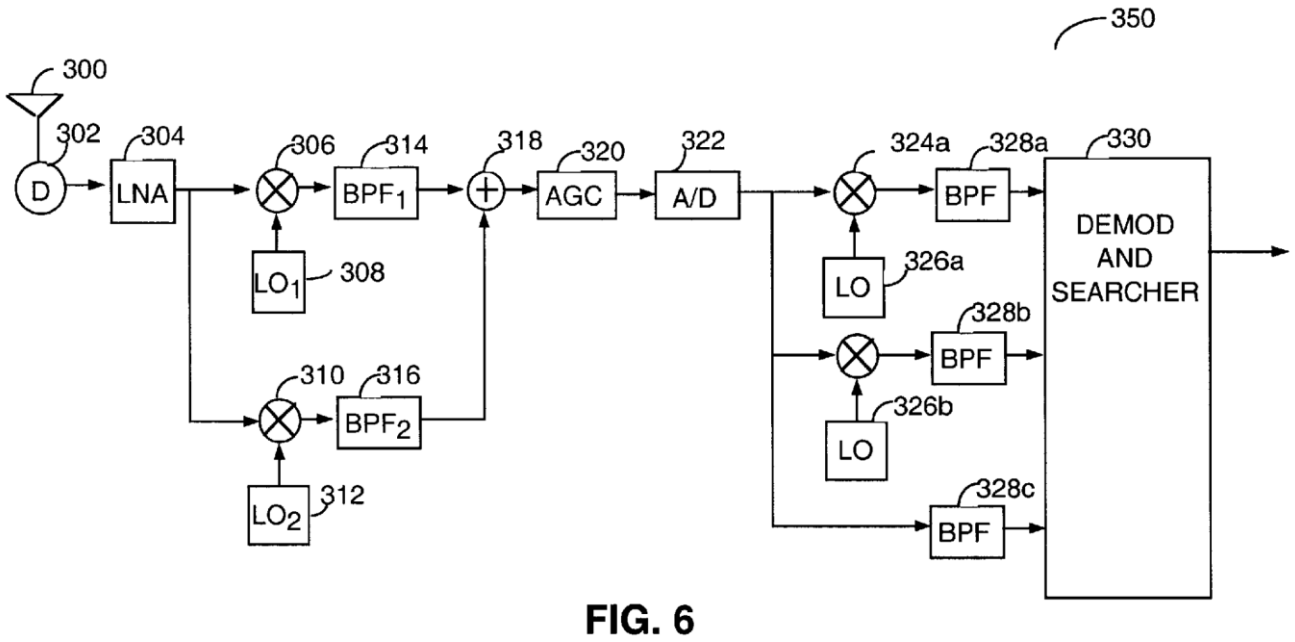


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.5] converting the second digital signal into a second analog signal using a second digital-to-analog converter, the second analog signal carrying the second data across a second frequency range;	Chen-868 discloses "converting the second digital signal into a second analog signal using a second digital-to-analog converter, the second analog signal carrying the second data across a second frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

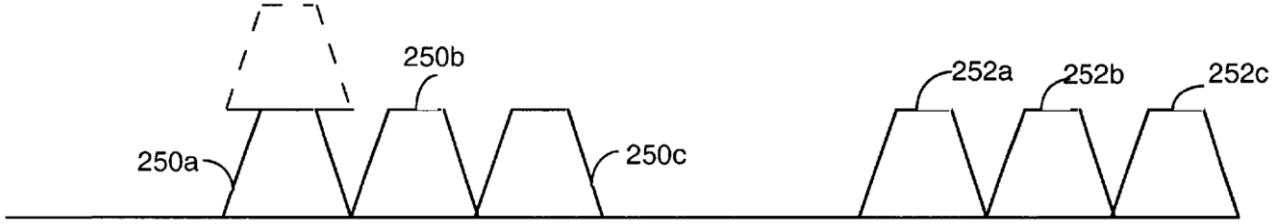


FIG. 5

See, e.g., Chen-868 at Figure 5.

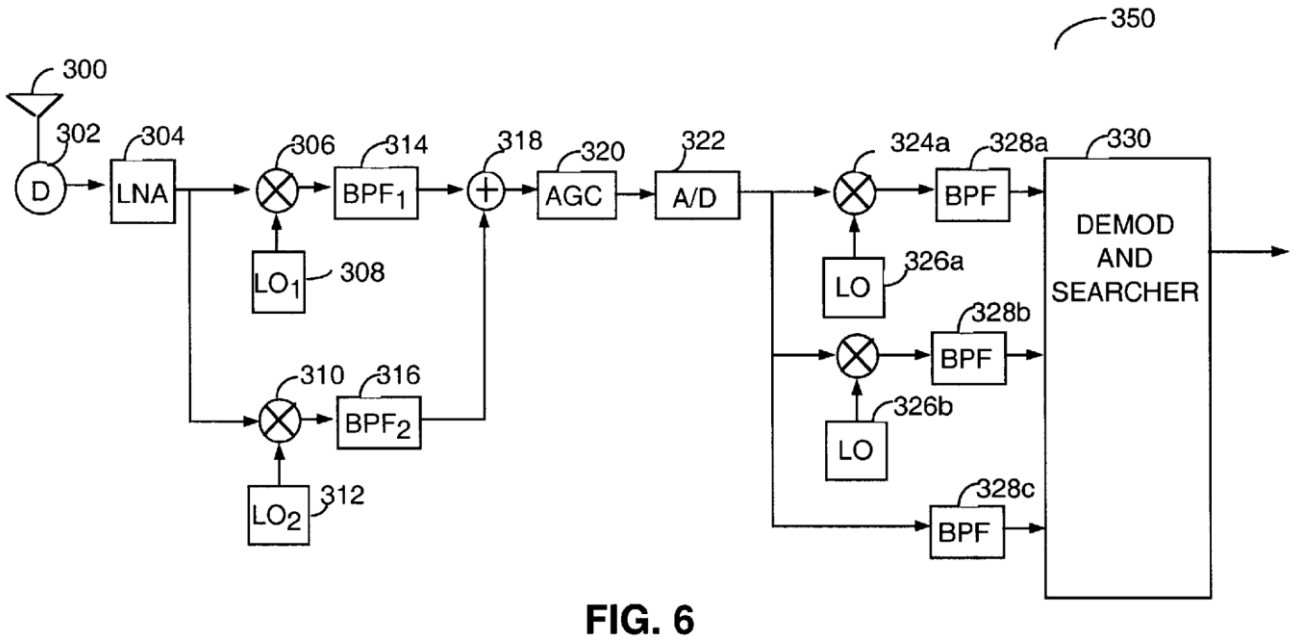


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.6] up-converting the first analog signal to a first RF center frequency to produce a first up-converted analog signal, wherein the first up-converted analog signal comprises a first up-converted frequency range from the first RF center frequency minus one-half the first frequency range to the first RF center frequency plus one-half the first frequency range;	Chen-868 discloses "up-converting the first analog signal to a first RF center frequency to produce a first up-converted analog signal, wherein the first up-converted analog signal comprises a first up-converted frequency range from the first RF center frequency minus one-half the first frequency range to the first RF center frequency plus one-half the first frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

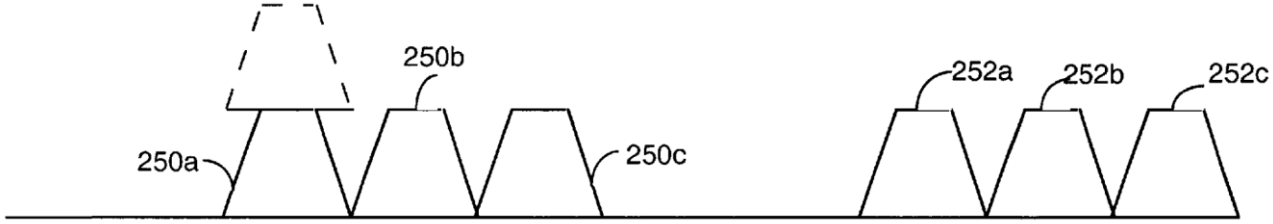


FIG. 5

See, e.g., Chen-868 at Figure 5.

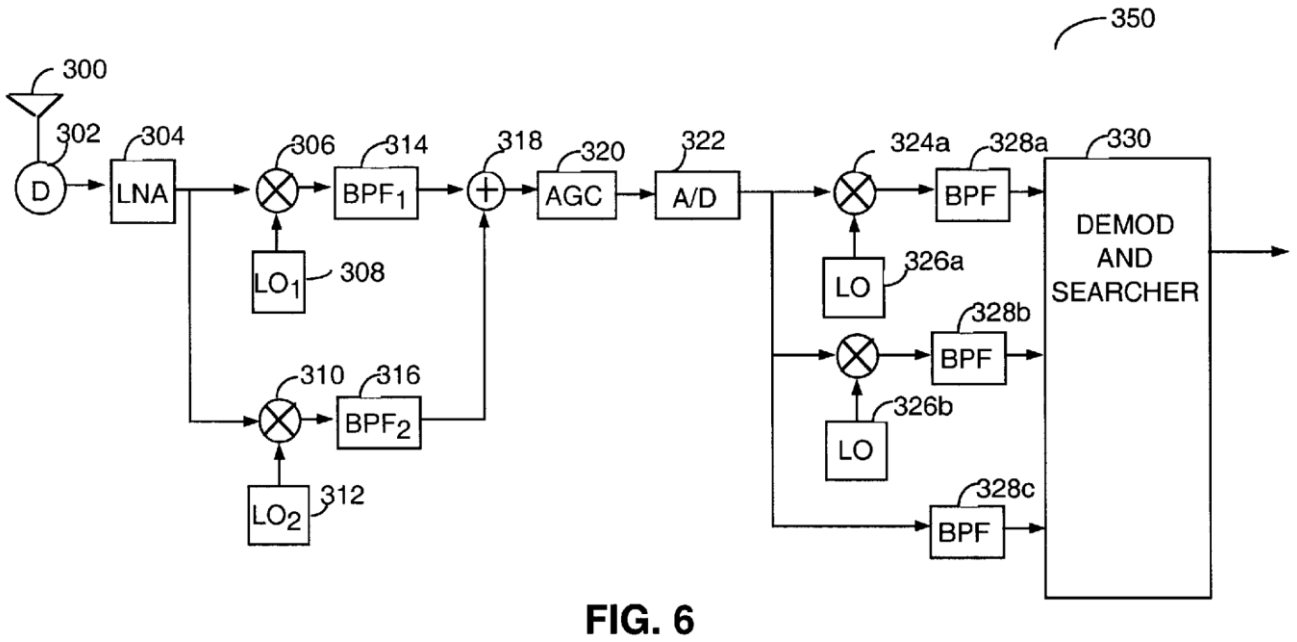


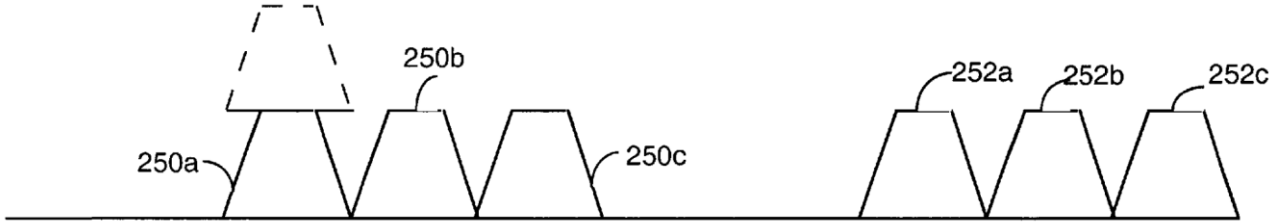
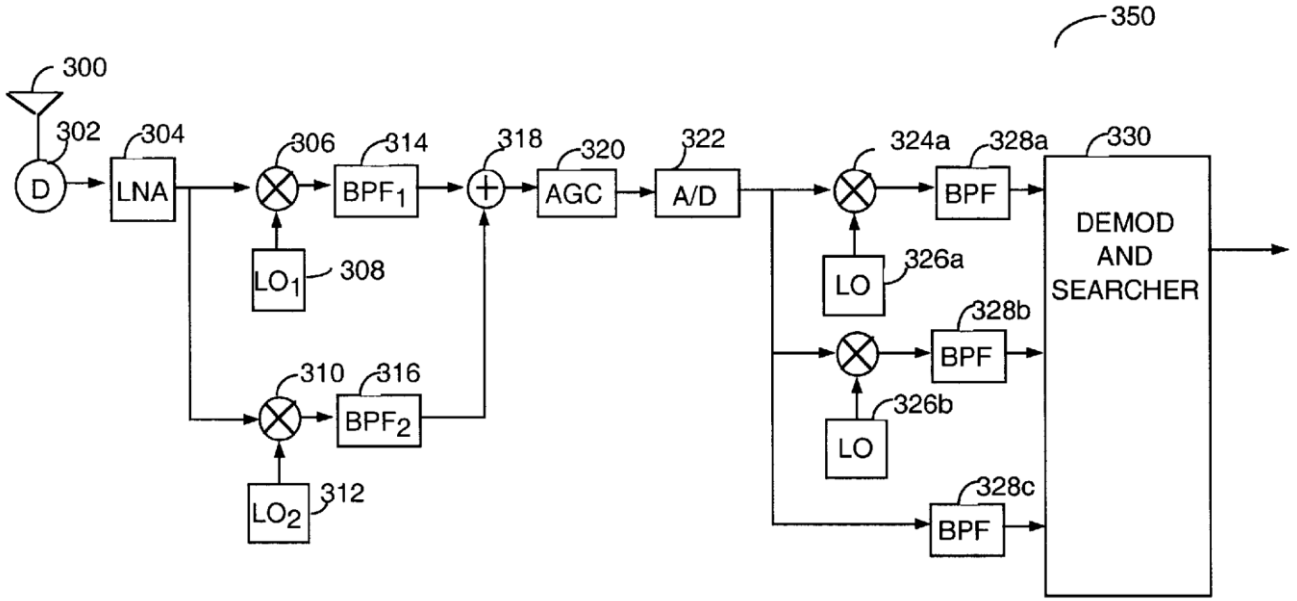
FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.7] up-converting the second analog signal to a second RF center frequency greater than the first center RF frequency to produce a second up-converted analog signal, wherein the second up-converted analog signal comprises a second up-converted frequency range from the second RF center frequency minus one-half the second frequency range to the second RF center frequency plus one-half the second frequency range, and wherein a frequency difference between the first RF center frequency and the second RF center frequency is greater than the sum of one-half the first frequency range and one-	Chen-868 discloses "up-converting the second analog signal to a second RF center frequency greater than the first center RF frequency to produce a second up-converted analog signal, wherein the second up-converted analog signal comprises a second up-converted frequency range from the second RF center frequency minus one-half the second frequency range to the second RF center frequency plus one-half the second frequency range, and wherein a frequency difference between the first RF center frequency and the second RF center frequency is greater than the sum of one-half the first frequency range and one-half the second frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
half the second frequency range;	 FIG. 5 *See, e.g.*, Chen-868 at Figure 5.  FIG. 6

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Figure 6. FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.8] combining the first up-converted analog signal and the second up-converted analog signal to produce a combined up-converted signal;	Chen-868 discloses "combining the first up-converted analog signal and the second up-converted analog signal to produce a combined up-converted signal." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

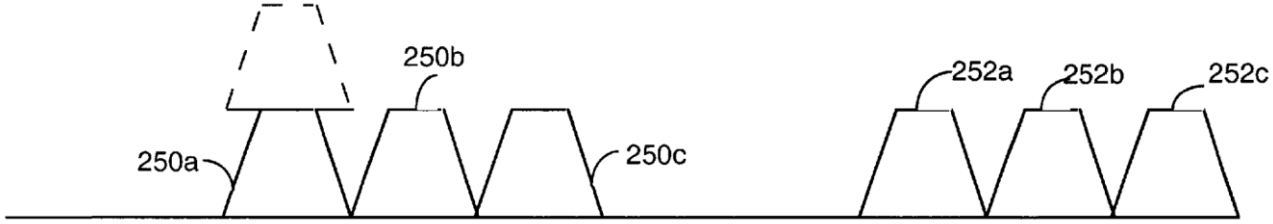


FIG. 5

See, e.g., Chen-868 at Figure 5.

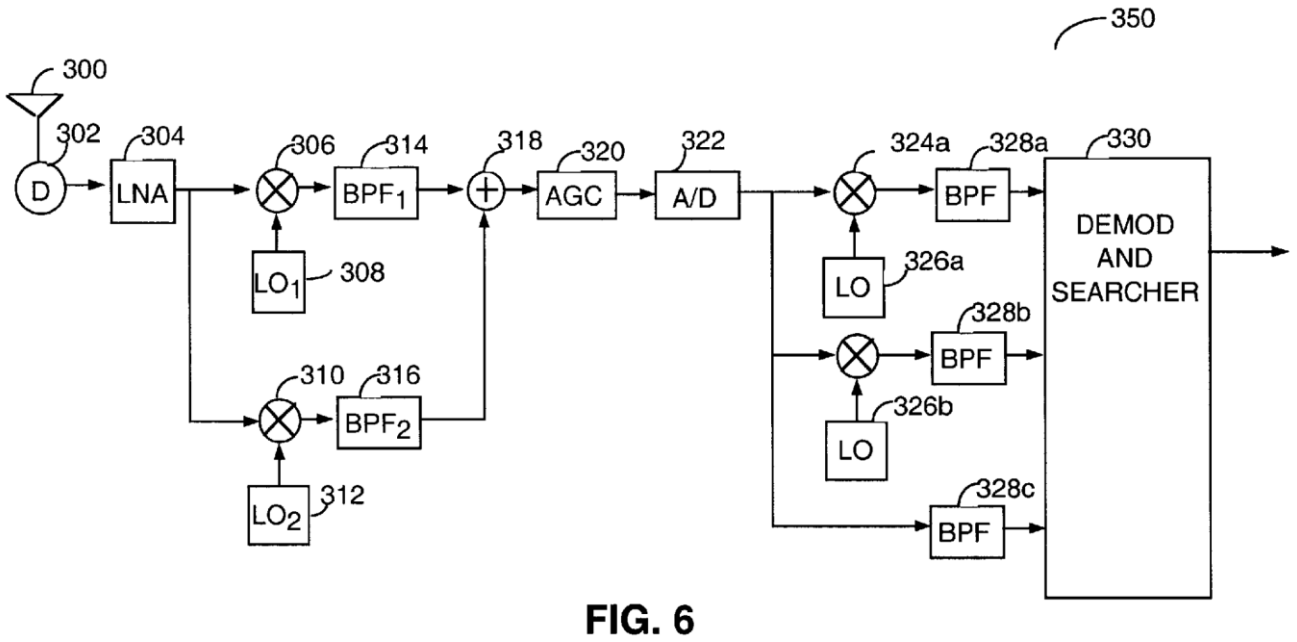


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.9] amplifying the combined up-converted signal in a power amplifier resulting in an amplified combined up-converted signal; and	Chen-868 discloses "amplifying the combined up-converted signal in a power amplifier resulting in an amplified combined up-converted signal." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

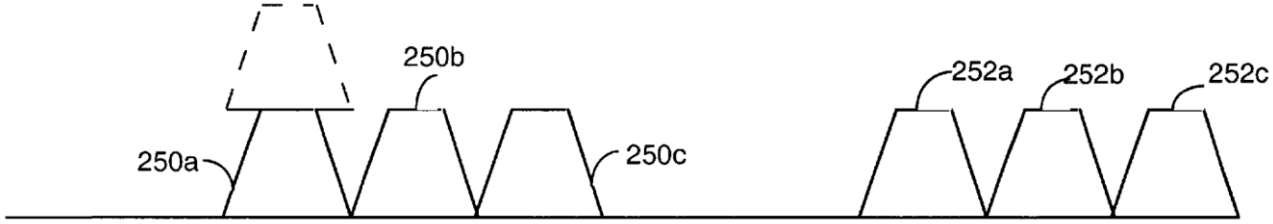


FIG. 5

See, e.g., Chen-868 at Figure 5.

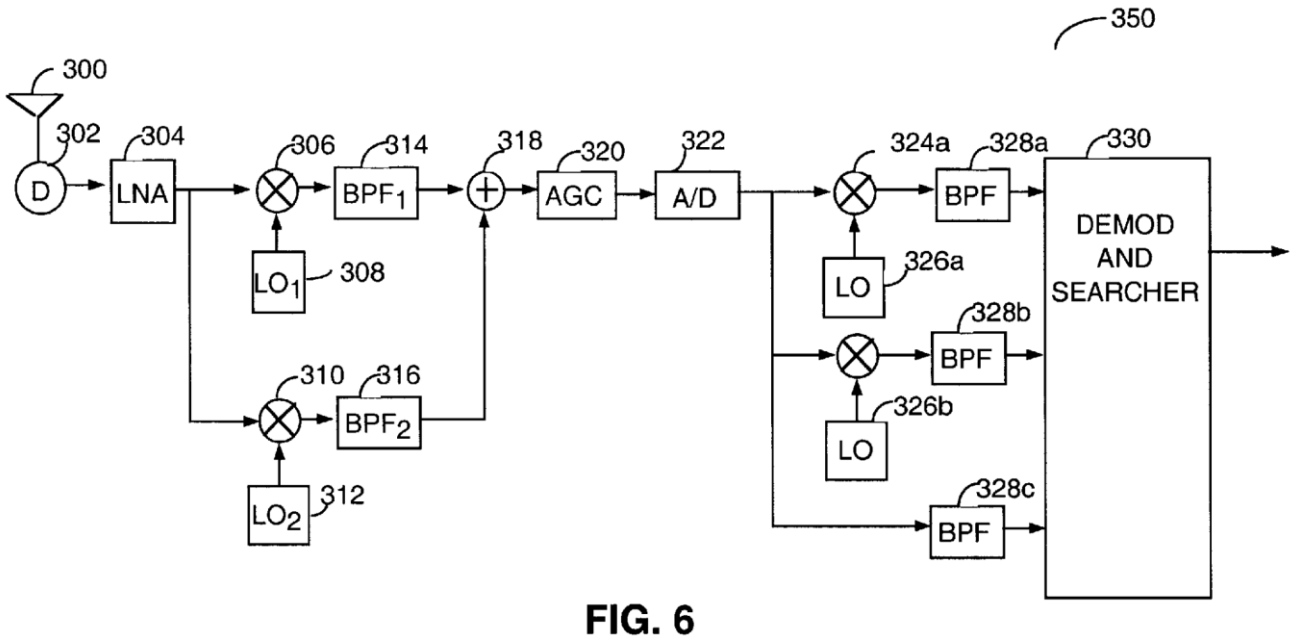


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the ’802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.10] transmitting the amplified combined up-converted signal on a first antenna,	Chen-868 discloses "transmitting the amplified combined up-converted signal on a first antenna." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

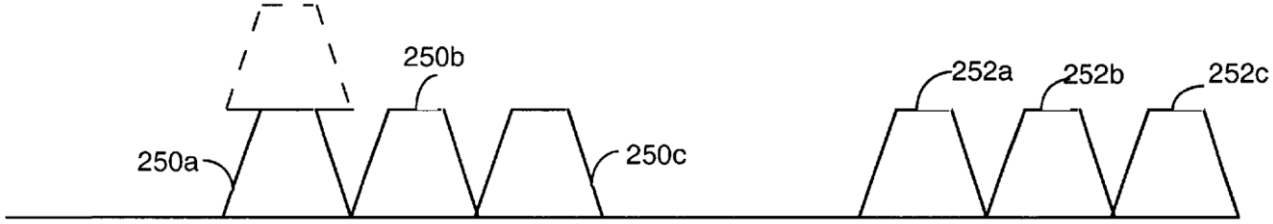


FIG. 5

See, e.g., Chen-868 at Figure 5.

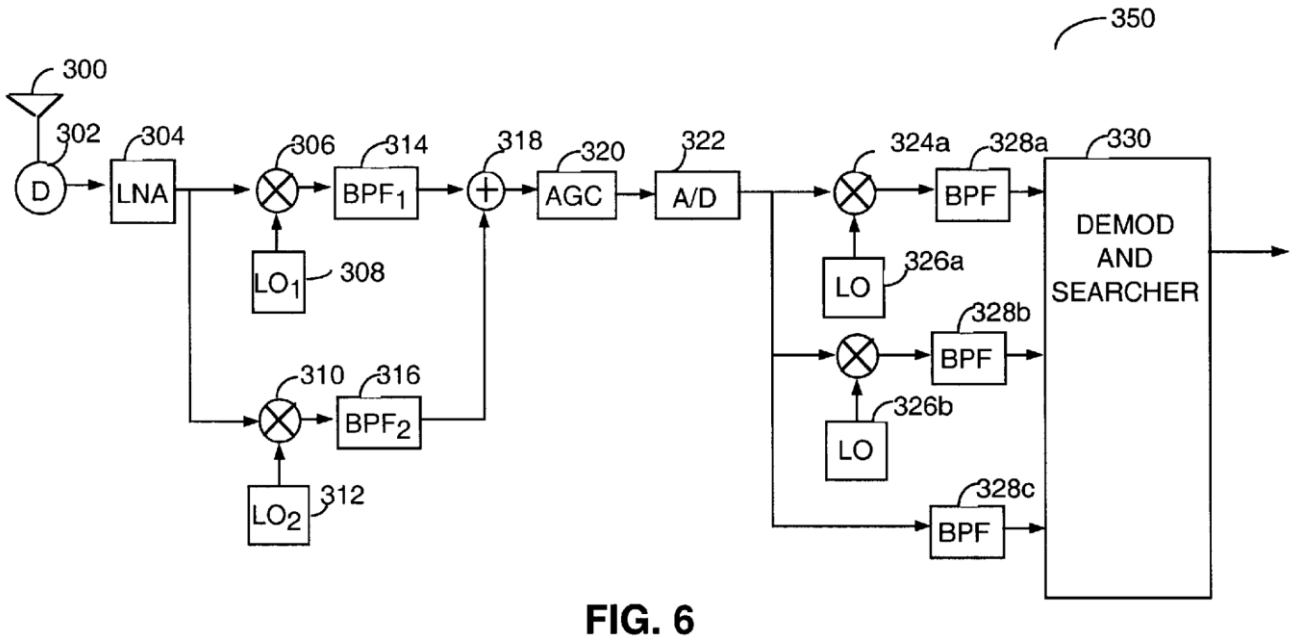


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the ’802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[10.11] wherein the bandwidth of said power amplifier is greater than the difference between a lowest frequency in the first up-converted frequency range and a highest frequency in the second up-converted frequency range.	Chen-868 discloses "wherein the bandwidth of said power amplifier is greater than the difference between a lowest frequency in the first up-converted frequency range and a highest frequency in the second up-converted frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868

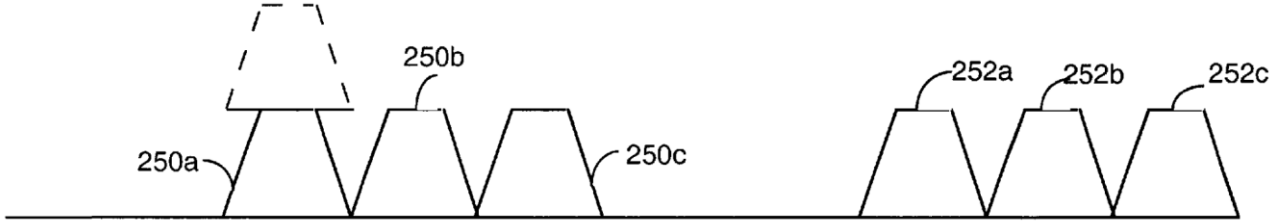


FIG. 5

See, e.g., Chen-868 at Figure 5.

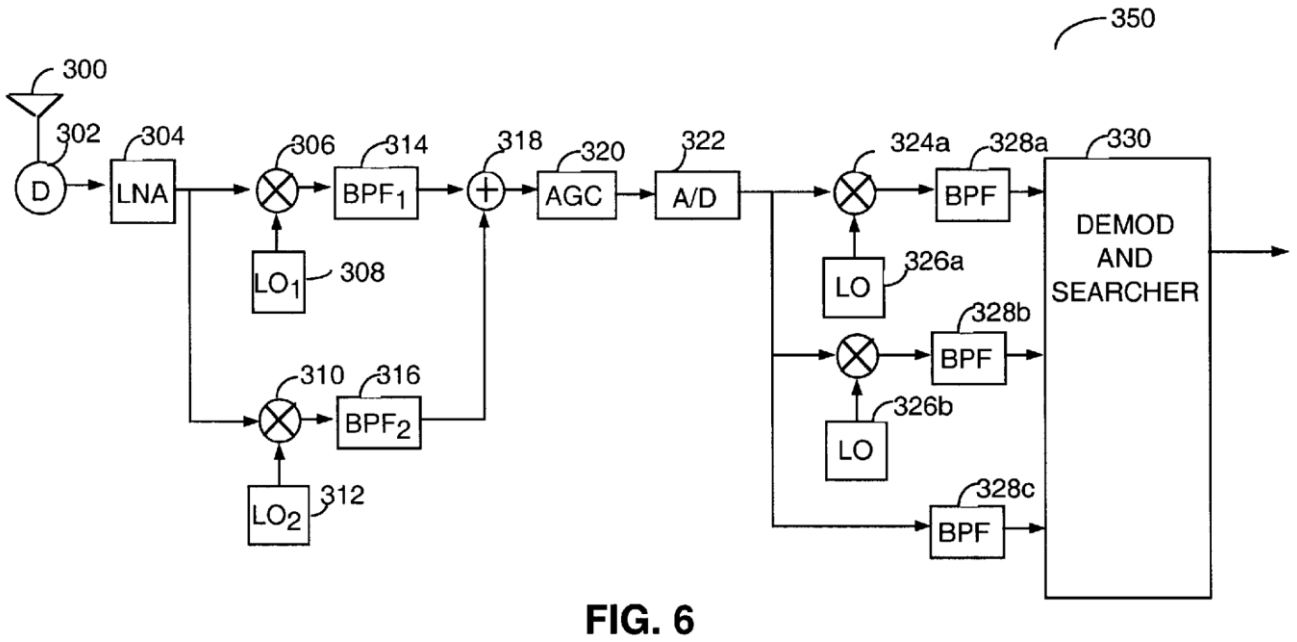


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 10 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 13 of the '802 Patent	Prior Art Reference – Chen-868
[13.1] The method of claim 10	Chen-868 discloses all the elements of claim 10 for all the reasons provided above.
[13.2] wherein the first digital signal is encoded using a first wireless protocol and the second digital signal is encoded using a second wireless protocol.	Chen-868 discloses "wherein the first digital signal is encoded using a first wireless protocol and the second digital signal is encoded using a second wireless protocol." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 13 of the '802 Patent	Prior Art Reference – Chen-868

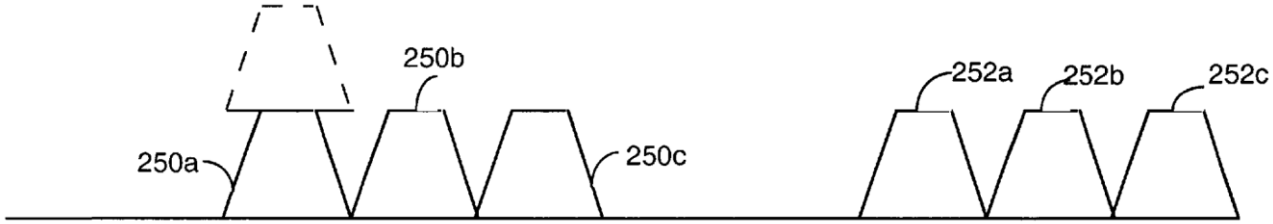


FIG. 5

See, e.g., Chen-868 at Figure 5.

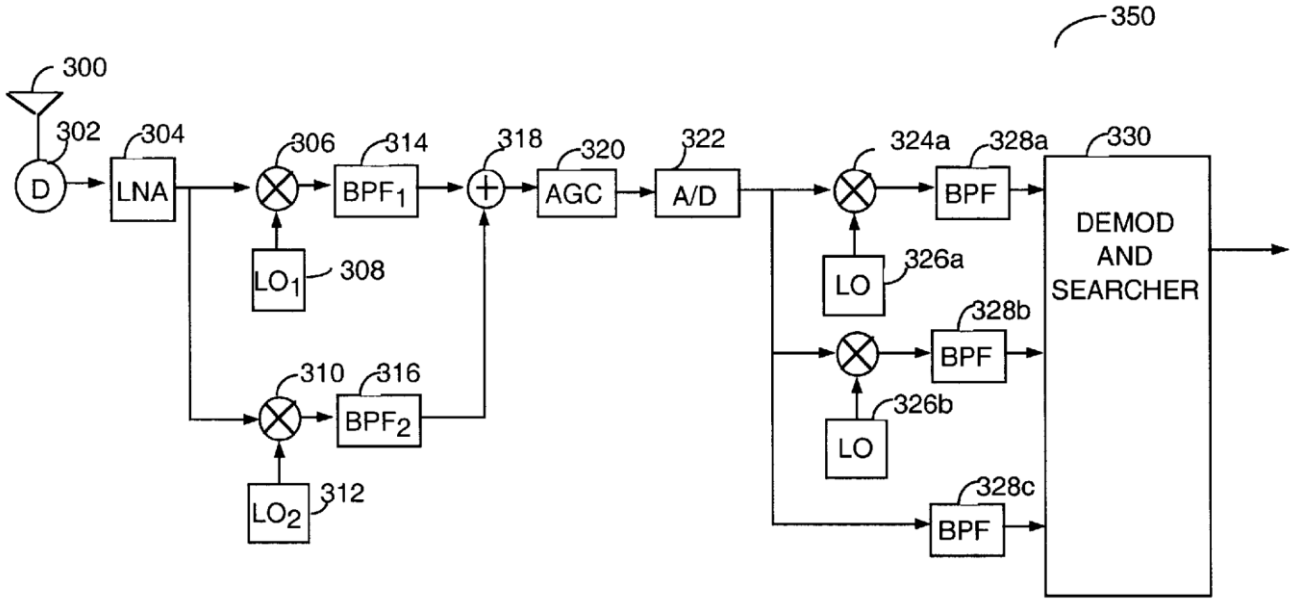


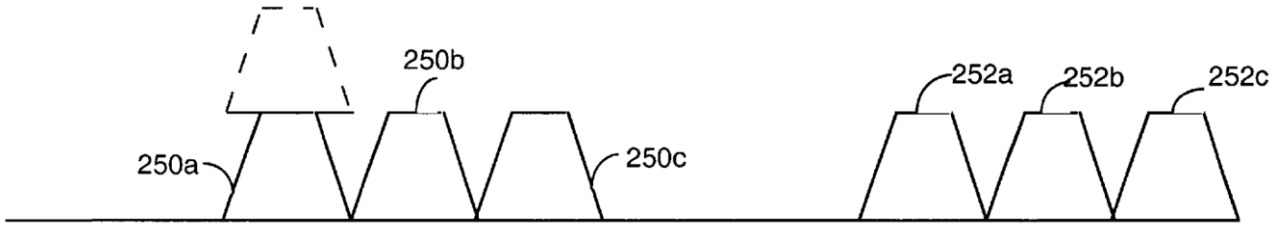
FIG. 6

Claim 13 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Figure 6. FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be

Claim 13 of the '802 Patent	Prior Art Reference – Chen-868
	understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal

Claim 13 of the '802 Patent	Prior Art Reference – Chen-868
	from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
[14.1] The method of claim 10	Chen-868 discloses all the elements of claim 10 for all the reasons provided above.
[14.2] wherein the second data is the same as the first data, the method further comprising:	Chen-868 discloses "wherein the second data is the same as the first data, the method further comprising." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  FIG. 5 *See, e.g.*, Chen-868 at Figure 5.

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868

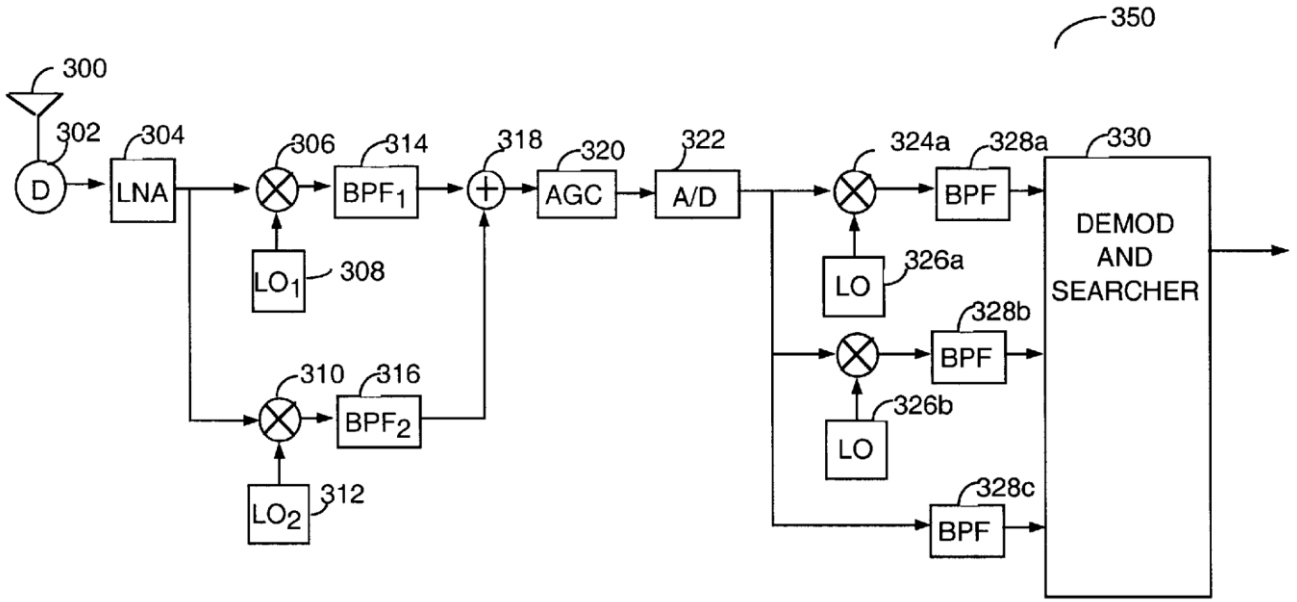


FIG. 6

See, e.g., Chen-868 at Figure 6.

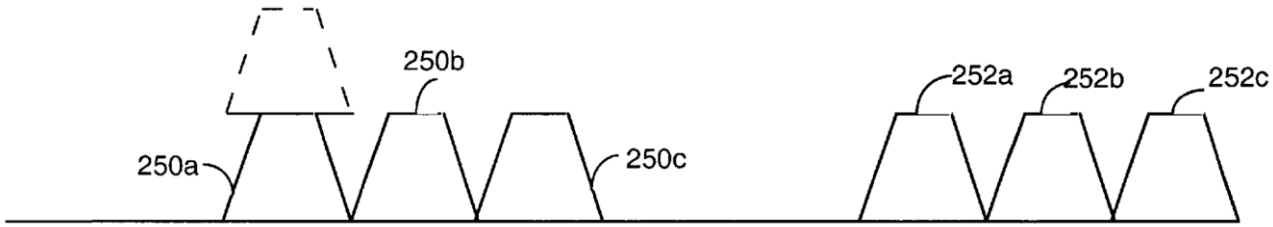
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[14.3] receiving the transmitted signal on a second antenna;	Chen-868 discloses "receiving the transmitted signal on a second antenna." See, e.g.:

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868

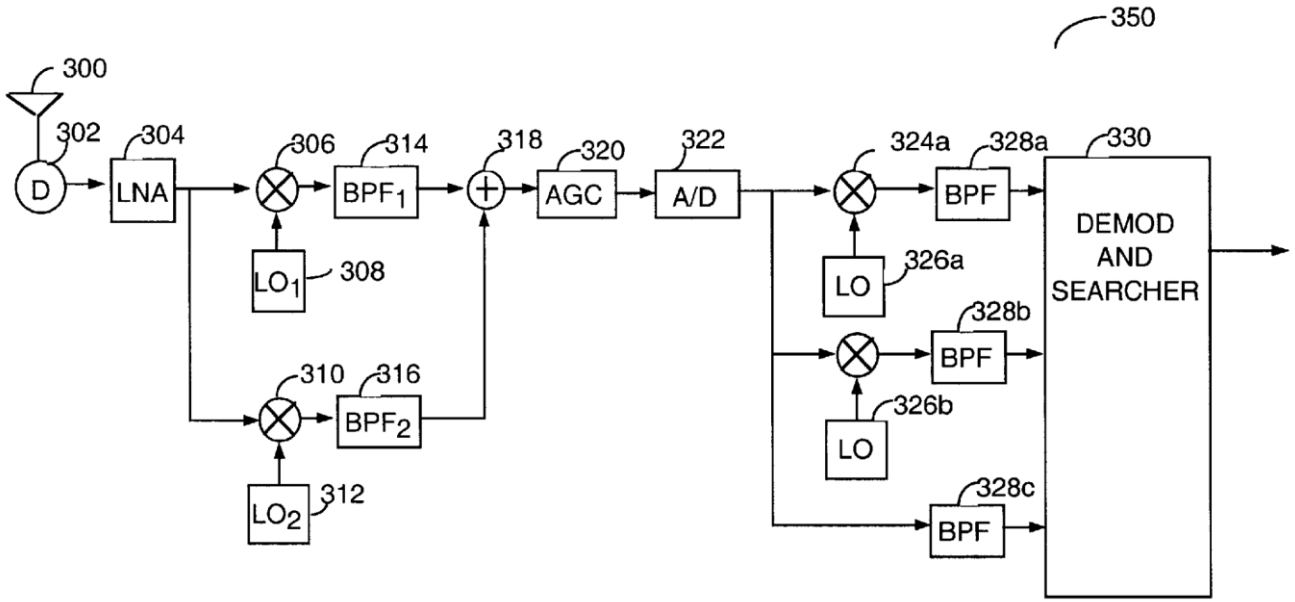


FIG. 6

See, e.g., Chen-868 at Figure 6.

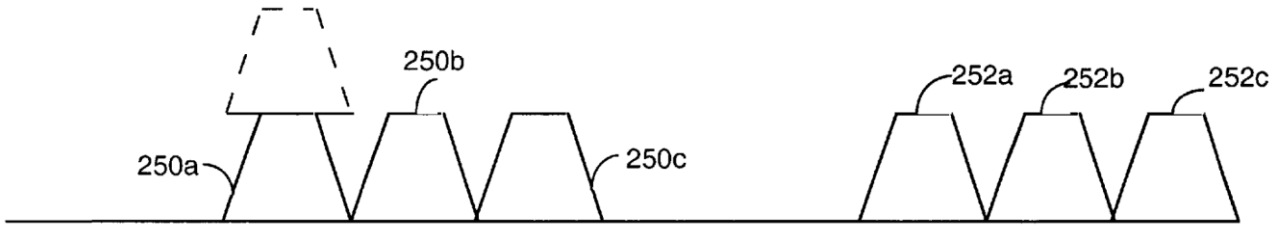
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[14.4] amplifying the received signal in a low noise amplifier resulting in an amplified	Chen-868 discloses "amplifying the received signal in a low noise amplifier resulting in an amplified received up-converted signal, wherein the bandwidth of said low noise amplifier is greater than the

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
received up-converted signal, wherein the bandwidth of said low noise amplifier is greater than the difference between the lowest frequency in the first up-converted frequency range and the highest frequency in the second up-converted frequency range;	difference between the lowest frequency in the first up-converted frequency range and the highest frequency in the second up-converted frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868

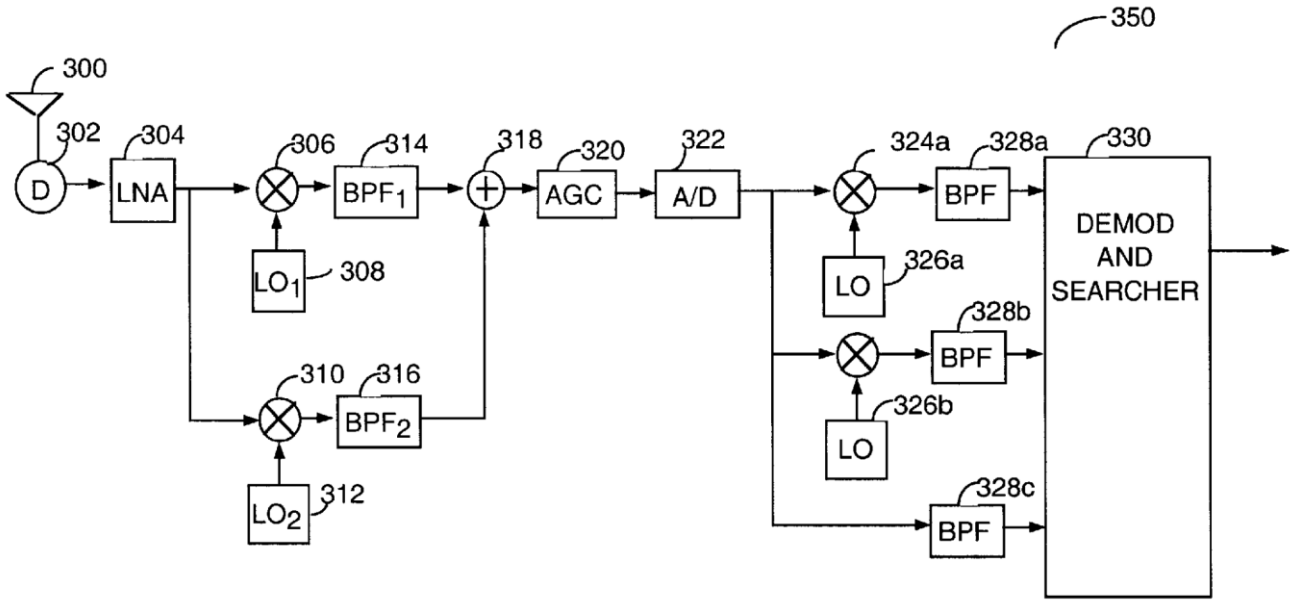


FIG. 6

See, e.g., Chen-868 at Figure 6.

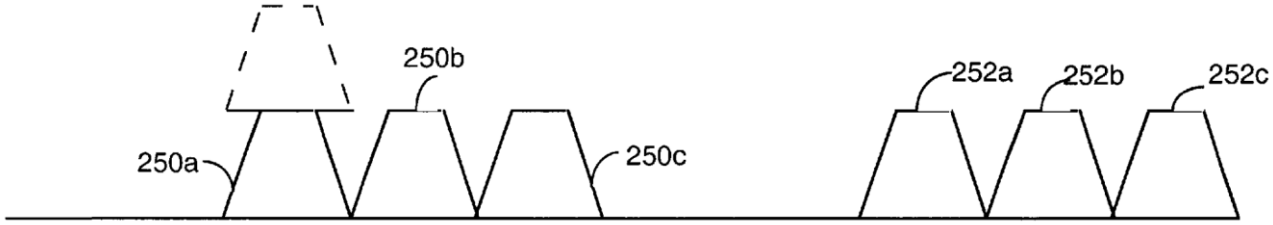
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[14.5] down-converting the amplified received up-converted signal using a first	Chen-868 discloses "down-converting the amplified received up-converted signal using a first down-converter and a signal corresponding to the first RF center frequency to produce a fourth analog signal corresponding to the first analog signal." See, e.g.:

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
down-converter and a signal corresponding to the first RF center frequency to produce a fourth analog signal corresponding to the first analog signal; and	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868

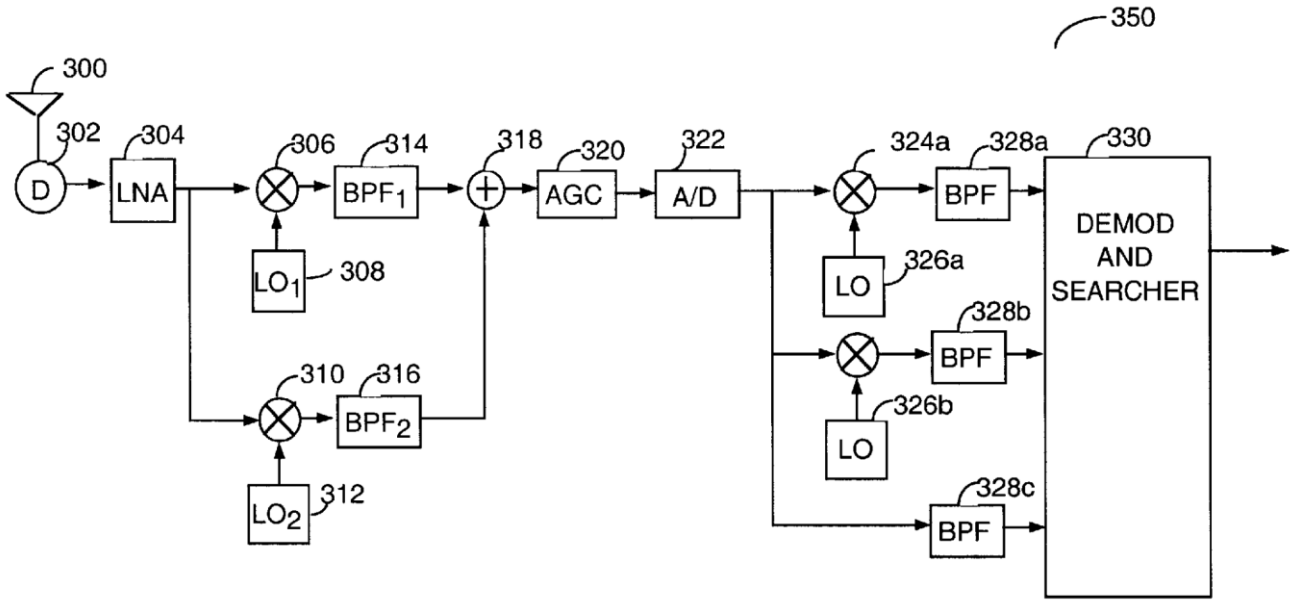


FIG. 6

See, e.g., Chen-868 at Figure 6.

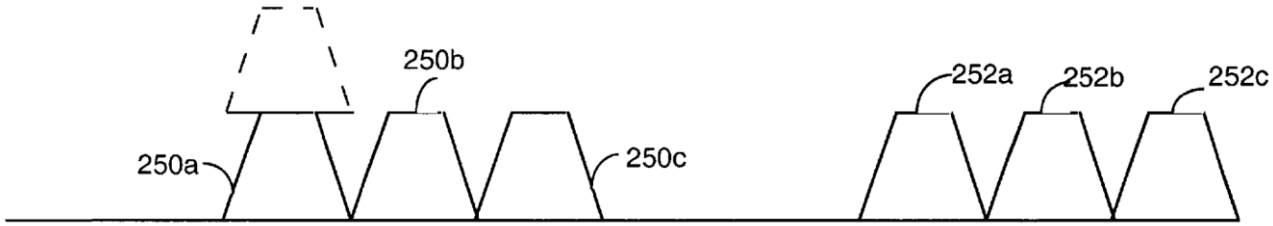
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[14.6] down-converting the amplified received up-converted analog signal using	Chen-868 discloses "down-converting the amplified received up-converted analog signal using a second down-converter and a signal corresponding to the second RF center frequency to produce a fifth analog signal corresponding to the second analog signal." See, e.g.:

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
a second down-converter and a signal corresponding to the second RF center frequency to produce a fifth analog signal corresponding to the second analog signal.	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868

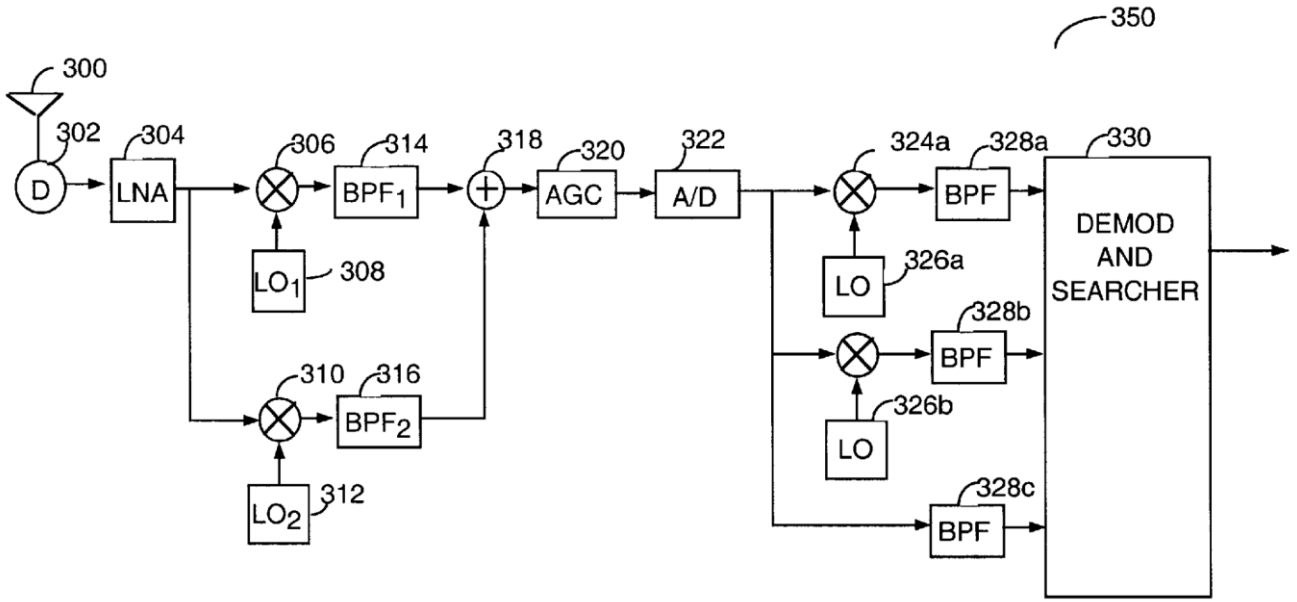


FIG. 6

See, e.g., Chen-868 at Figure 6.

FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

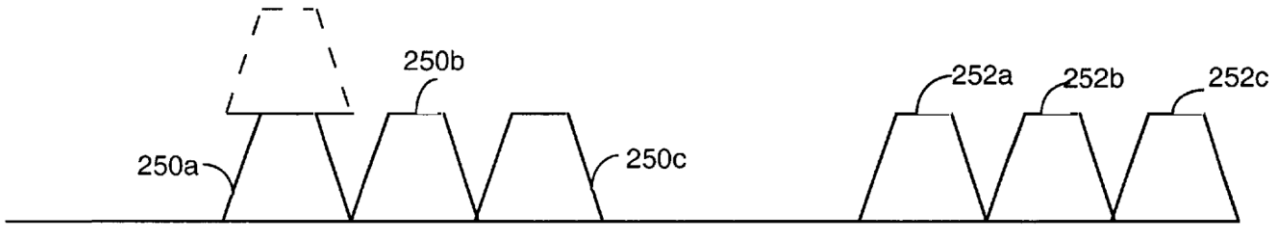
See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 14 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
[17.1] A wireless communication system comprising:	To the extent the preamble is limiting, Chen-868 discloses "A wireless communication system comprising." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[17.2] a baseband digital system for providing a first digital signal comprising a first data to be transmitted and a second digital signal	Chen-868 discloses "a baseband digital system for providing a first digital signal comprising a first data to be transmitted and a second digital signal comprising a second data to be transmitted." See, e.g.:

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
comprising a second data to be transmitted;	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868

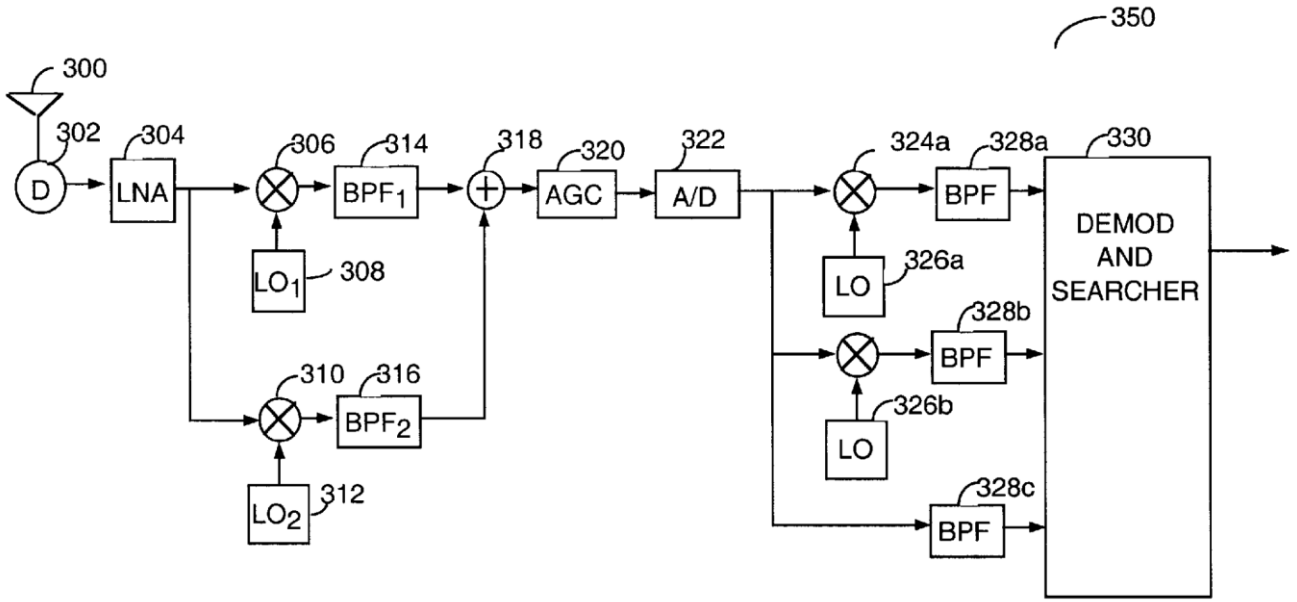


FIG. 6

See, e.g., Chen-868 at Figure 6.

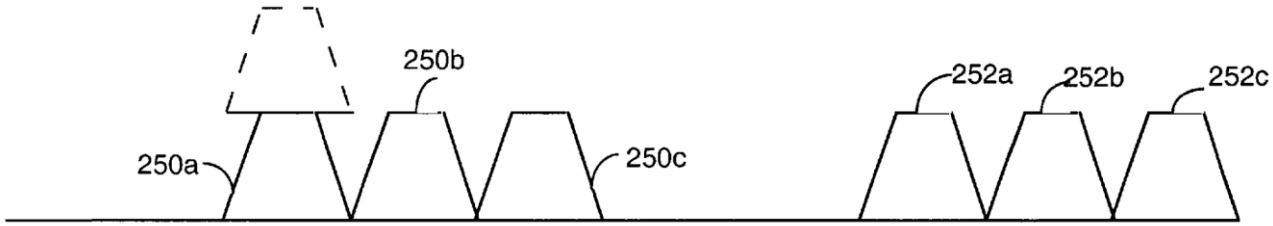
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[17.3] a first digital-to-analog converter for receiving the first digital signal and	Chen-868 discloses "a first digital-to-analog converter for receiving the first digital signal and converting the first digital signal into a first analog signal, the first analog signal carrying the first data across a first frequency range." See, e.g.:

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
converting the first digital signal into a first analog signal, the first analog signal carrying the first data across a first frequency range;	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868

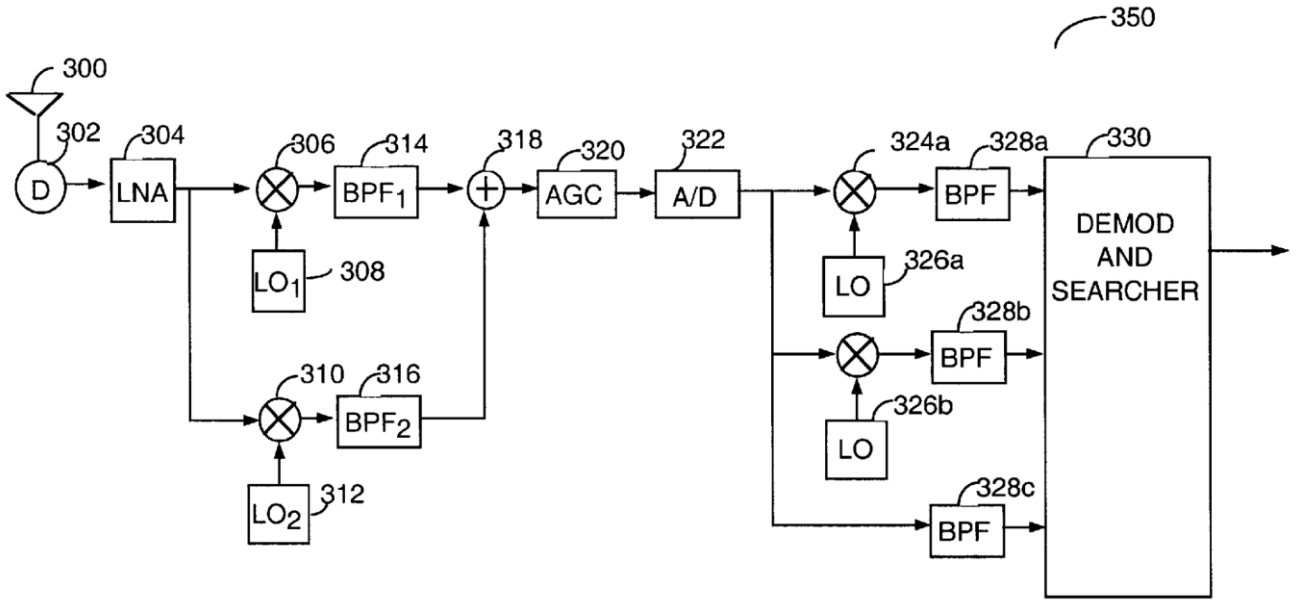


FIG. 6

See, e.g., Chen-868 at Figure 6.

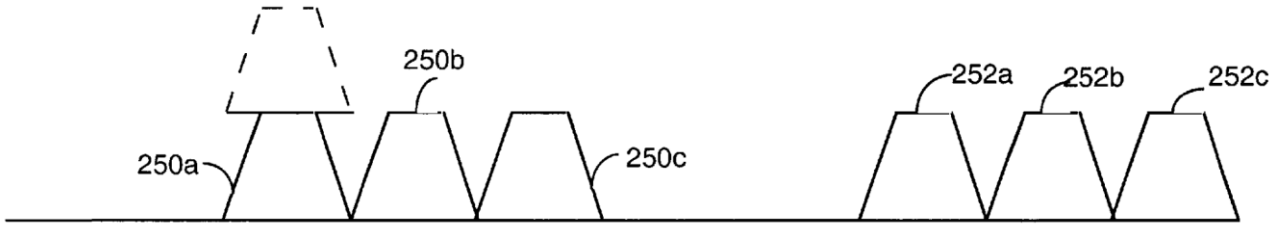
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[17.4] a second digital-to-analog converter for receiving the second digital signal and	Chen-868 discloses "a second digital-to-analog converter for receiving the second digital signal and converting the second digital signal into a second analog signal, the second analog signal carrying the second data across a second frequency range." See, e.g.:

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
converting the second digital signal into a second analog signal, the second analog signal carrying the second data across a second frequency range;	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868

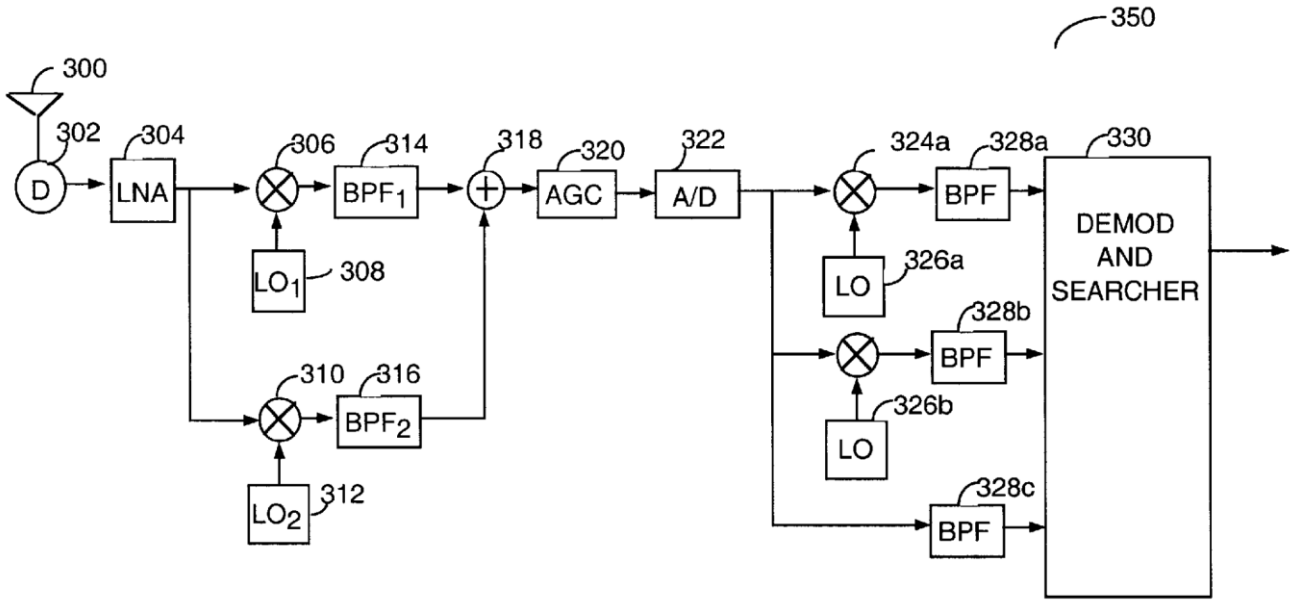


FIG. 6

See, e.g., Chen-868 at Figure 6.

FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

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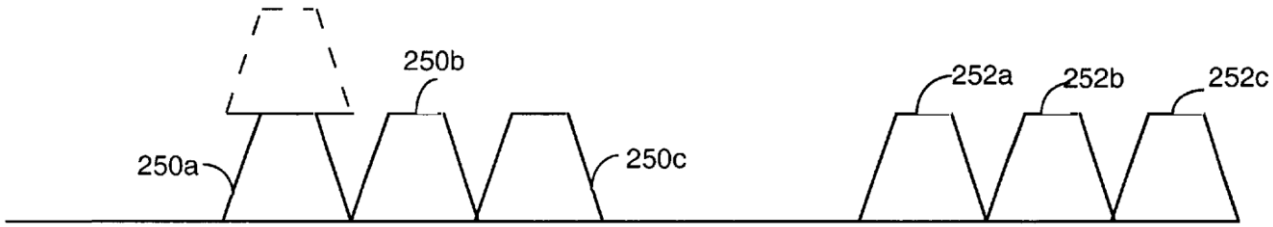
Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[17.5] a first up-converter circuit having a first input coupled to receive the first	Chen-868 discloses "a first up-converter circuit having a first input coupled to receive the first analog signal and a second input coupled to receive a first modulation signal having a first RF frequency, wherein the first up-converter outputs a first up-converted analog signal comprising a first up-

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
analog signal and a second input coupled to receive a first modulation signal having a first RF frequency, wherein the first up-converter outputs a first up-converted analog signal comprising a first up-converted frequency range from the first RF frequency minus one-half the first frequency range to the first RF frequency plus one-half the first frequency range;	converted frequency range from the first RF frequency minus one-half the first frequency range to the first RF frequency plus one-half the first frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868

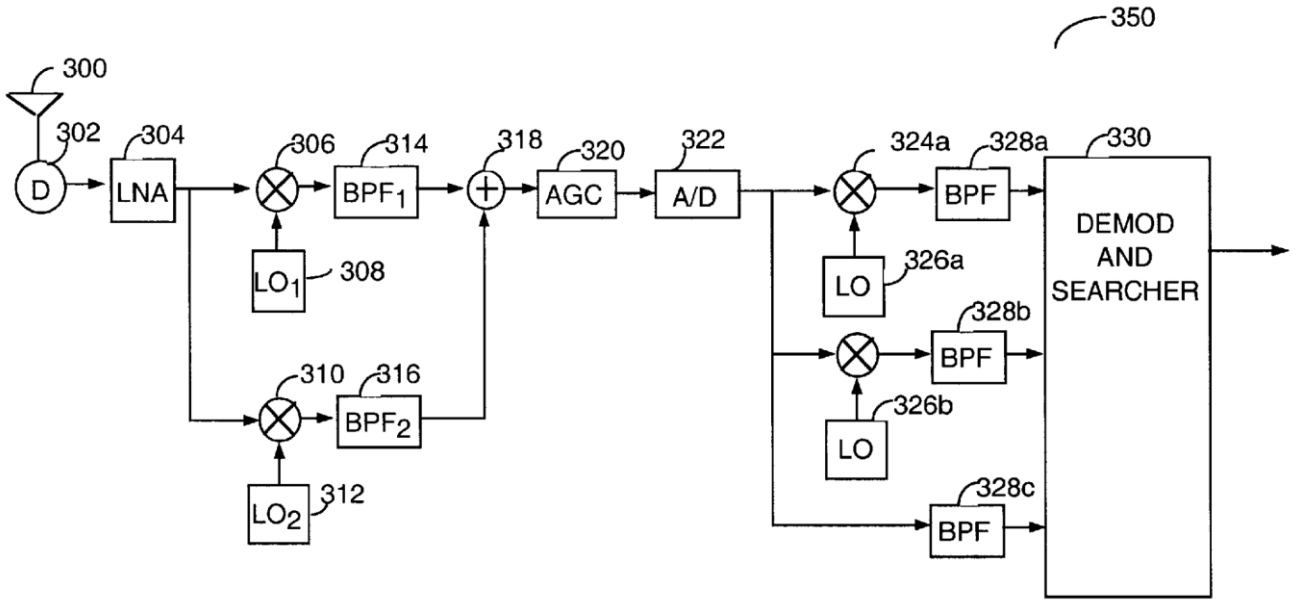


FIG. 6

See, e.g., Chen-868 at Figure 6.

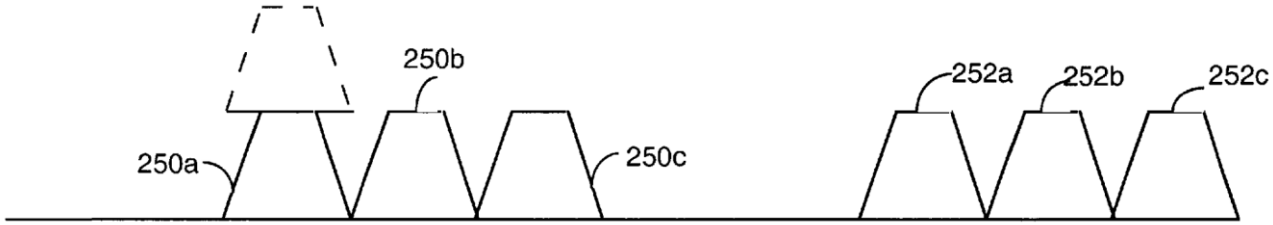
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[17.6] a second up-converter circuit having a first input coupled to receive the second	Chen-868 discloses "a second up-converter circuit having a first input coupled to receive the second analog signal and a second input coupled to receive a second modulation signal having a second RF frequency, wherein the second up-converter outputs a second up-converted analog signal comprising

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
analog signal and a second input coupled to receive a second modulation signal having a second RF frequency, wherein the second up-converter outputs a second up-converted analog signal comprising a second up-converted frequency range from the second RF frequency minus one-half the second frequency range to the second RF frequency plus one-half the second frequency range, and wherein frequency difference between the first RF frequency and the second RF frequency is greater than the sum of one-half the first frequency range and one-half the second frequency range; and	a second up-converted frequency range from the second RF frequency minus one-half the second frequency range to the second RF frequency plus one-half the second frequency range, and wherein frequency difference between the first RF frequency and the second RF frequency is greater than the sum of one-half the first frequency range and one-half the second frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868

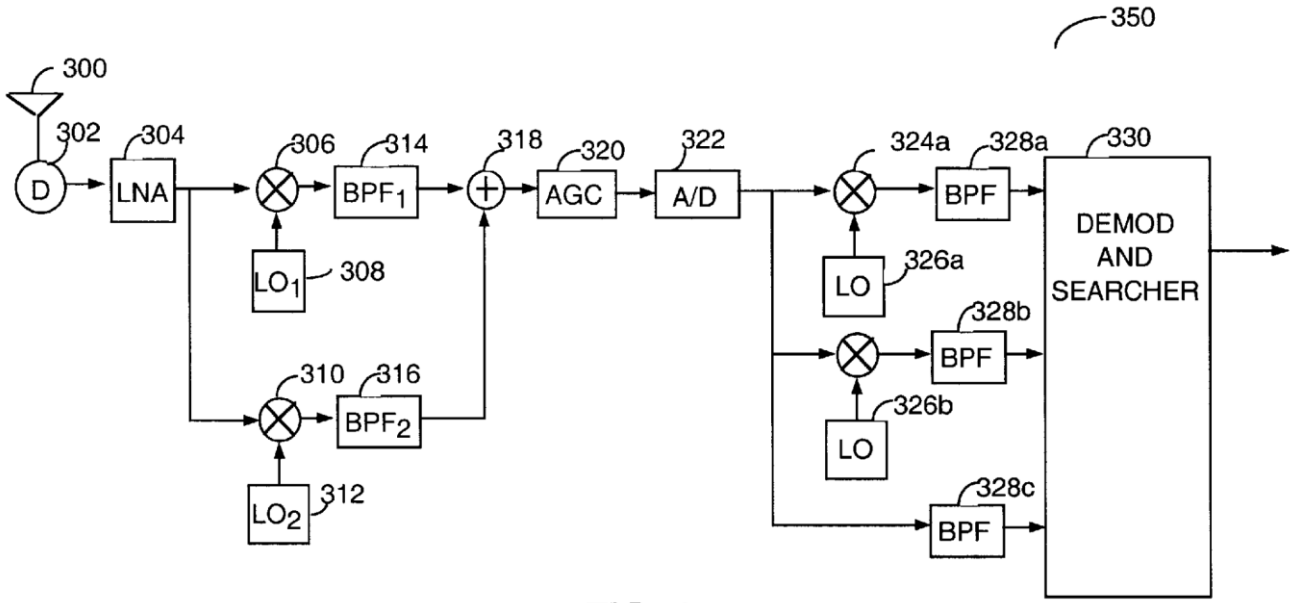


FIG. 6

See, e.g., Chen-868 at Figure 6.

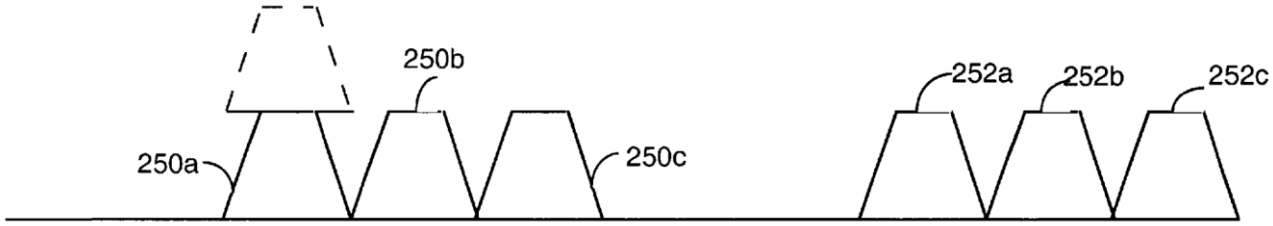
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
[17.7] a power amplifier coupled to receive the first and second up-converted analog signals, wherein the bandwidth of the power amplifier is greater than the difference between a lowest frequency in the first up-converted frequency range and a highest frequency in the second up-converted frequency range.	Chen-868 discloses "a power amplifier coupled to receive the first and second up-converted analog signals, wherein the bandwidth of the power amplifier is greater than the difference between a lowest frequency in the first up-converted frequency range and a highest frequency in the second up-converted frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868

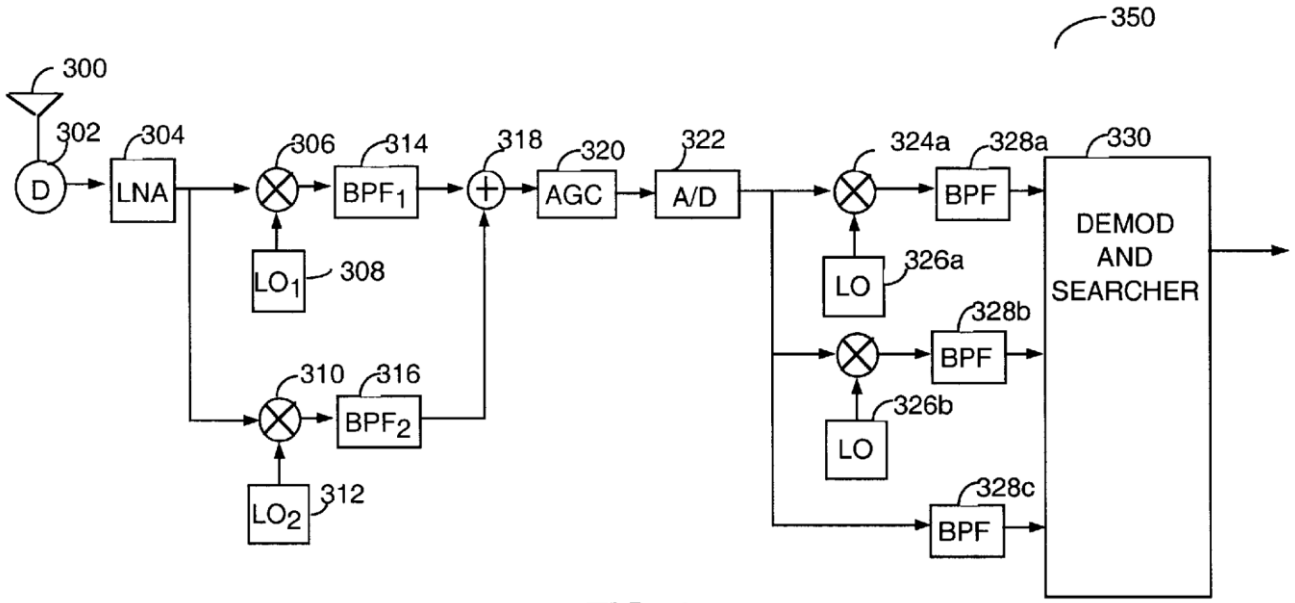


FIG. 6

See, e.g., Chen-868 at Figure 6.

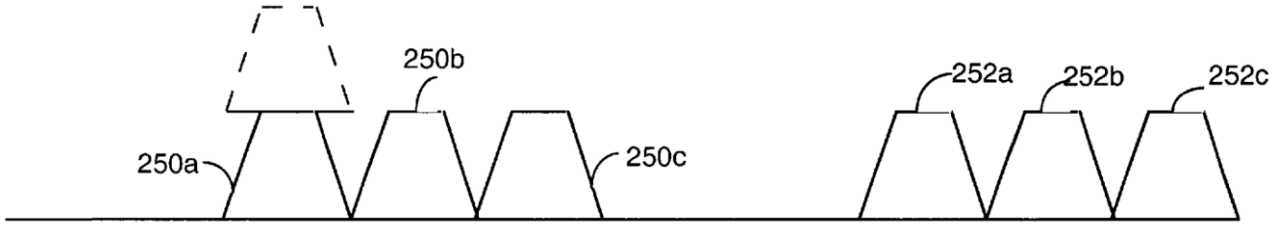
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

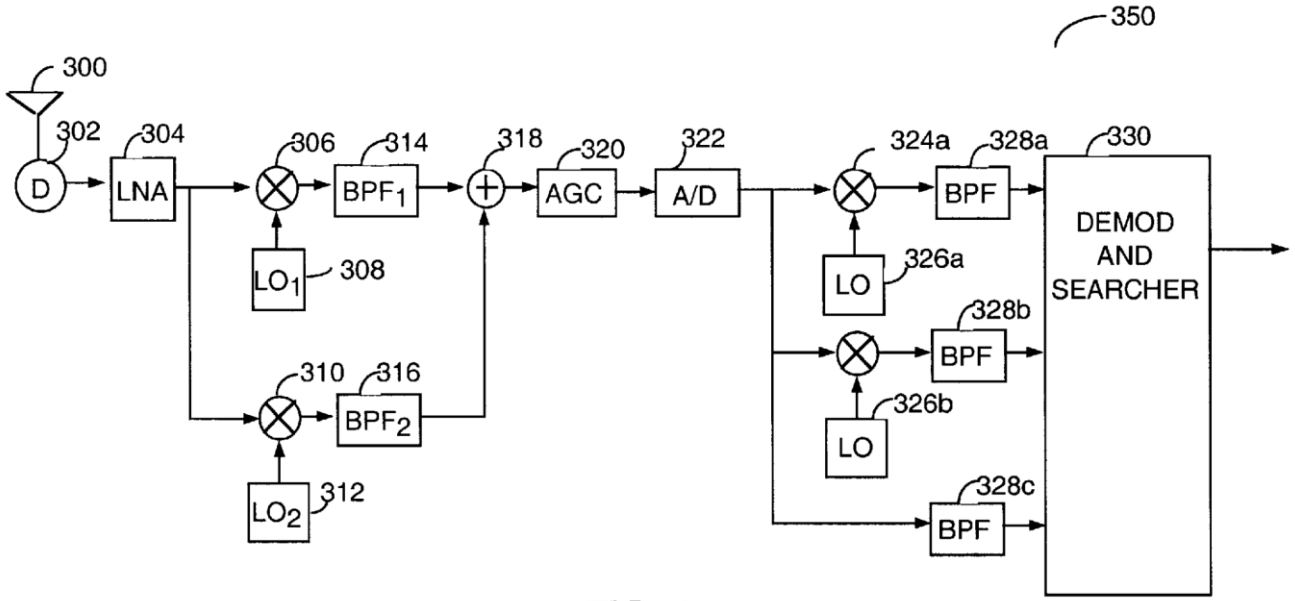
See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-

Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

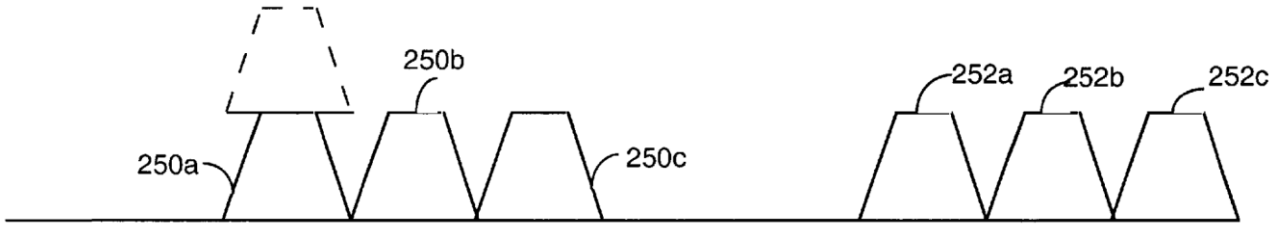
Claim 17 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 21 of the '802 Patent	Prior Art Reference – Chen-868
[21.1] The communication system of claim 17	Chen-868 discloses all the elements of claim 17 for all the reasons provided above.
[21.2] wherein the first data of the first digital signal is encoded using a first wireless protocol and the first data of the second digital signal is encoded using a second wireless protocol.	Chen-868 discloses "wherein the first data of the first digital signal is encoded using a first wireless protocol and the first data of the second digital signal is encoded using a second wireless protocol." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  FIG. 5

Claim 21 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Figure 5.  **FIG. 6** *See, e.g.*, Chen-868 at Figure 6. FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands,

Claim 21 of the '802 Patent	Prior Art Reference – Chen-868
	the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 21 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 22 of the '802 Patent	Prior Art Reference – Chen-868
[22.1] The communication system of claim 17	Chen-868 discloses all the elements of claim 17 for all the reasons provided above.
[22.2] wherein the second data corresponds to the first data and wherein the power amplifier outputs a third up-converted signal comprising the up-converted first analog signal and the up-converted second analog signal.	Chen-868 discloses "wherein the second data corresponds to the first data and wherein the power amplifier outputs a third up-converted signal comprising the up-converted first analog signal and the up-converted second analog signal." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  FIG. 5

Claim 22 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Figure 5.

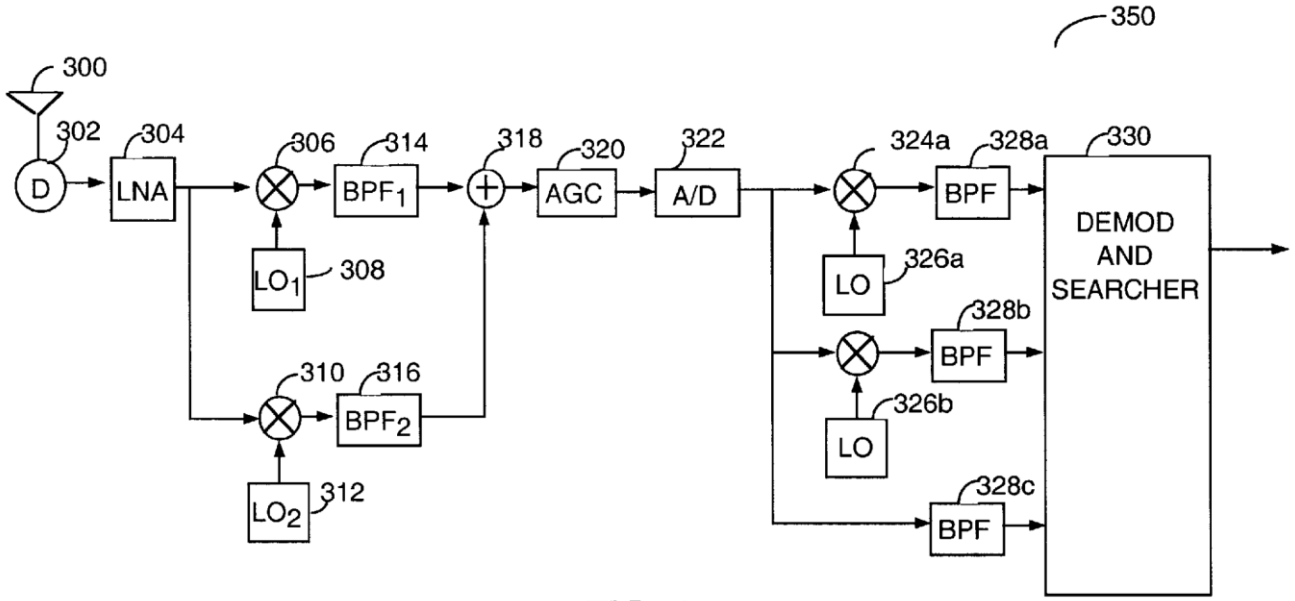


FIG. 6

See, e.g., Chen-868 at Figure 6.

FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands,

Claim 22 of the '802 Patent	Prior Art Reference – Chen-868
	the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band.

Claim 22 of the '802 Patent	Prior Art Reference – Chen-868
	The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 23 of the '802 Patent	Prior Art Reference – Chen-868
[23.1] The communication system of claim 17	Chen-868 discloses all the elements of claim 17 for all the reasons provided above.
[23.2] wherein first and second data to be transmitted comprise a plurality of OFDM symbols, wherein a first symbol is transmitted during a first time slot across the first up-converted frequency range and a second symbol is transmitted during the first time slot across the second up-converted frequency range, and wherein a third symbol is transmitted during a second time slot across the first up-converted frequency range and a fourth symbol is transmitted during the second time slot across a second up-converted frequency range.	Chen-868 discloses "wherein first and second data to be transmitted comprise a plurality of OFDM symbols, wherein a first symbol is transmitted during a first time slot across the first up-converted frequency range and a second symbol is transmitted during the first time slot across the second up-converted frequency range, and wherein a third symbol is transmitted during a second time slot across the first up-converted frequency range and a fourth symbol is transmitted during the second time slot across a second up-converted frequency range." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 23 of the '802 Patent	Prior Art Reference – Chen-868

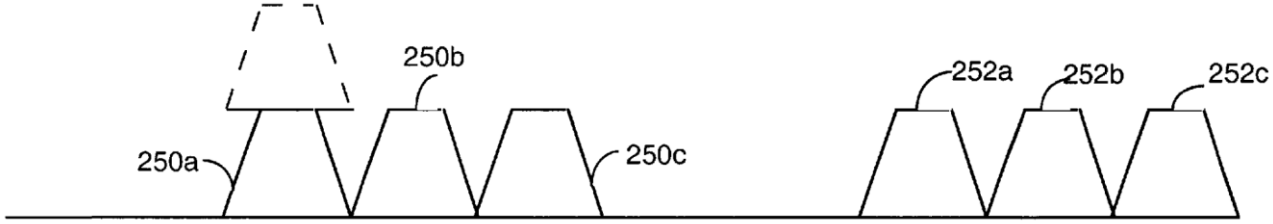


FIG. 5

See, e.g., Chen-868 at Figure 5.

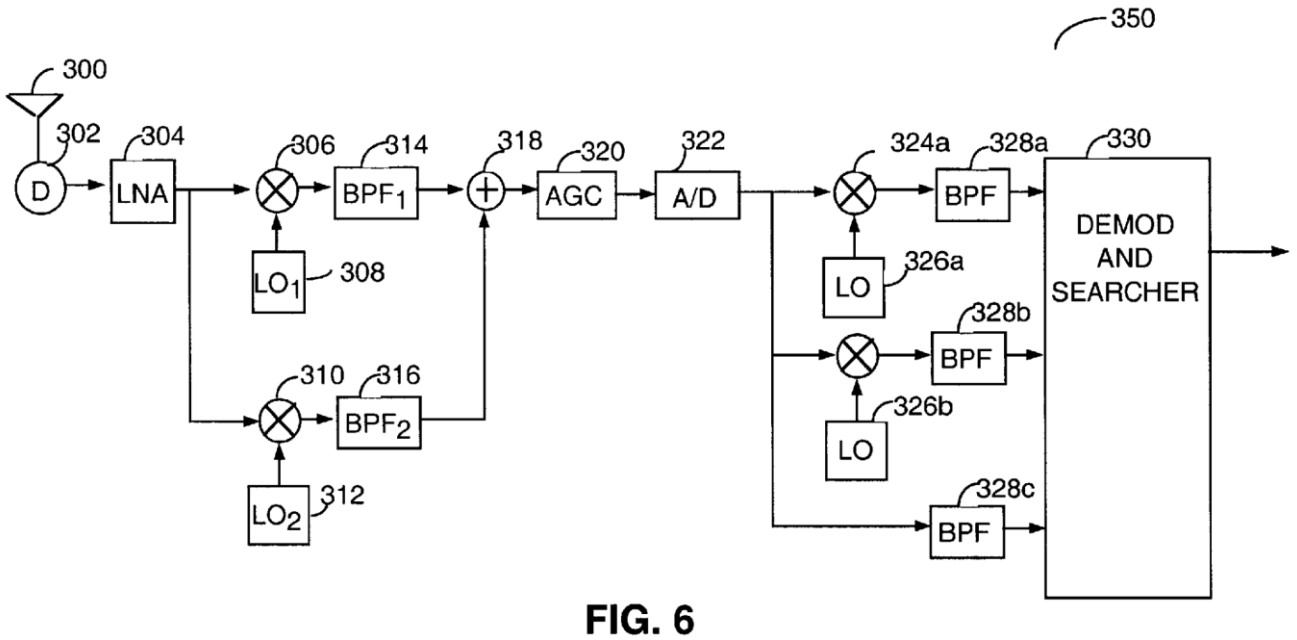


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 23 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation.

Claim 23 of the '802 Patent	Prior Art Reference – Chen-868
	Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system.

Claim 23 of the '802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
[24.1] An electronic circuit comprising:	To the extent the preamble is limiting, Chen-868 discloses "An electronic circuit comprising." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868

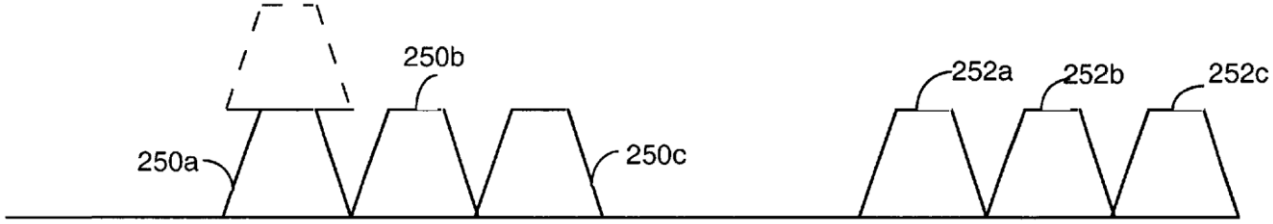


FIG. 5

See, e.g., Chen-868 at Figure 5.

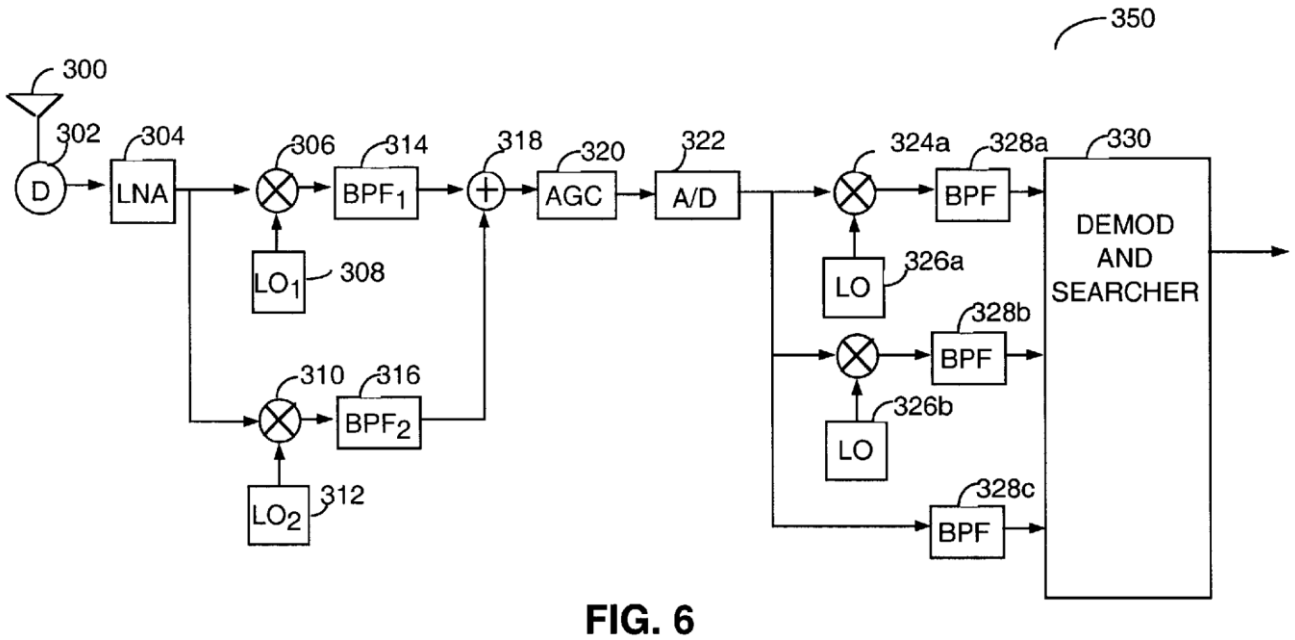
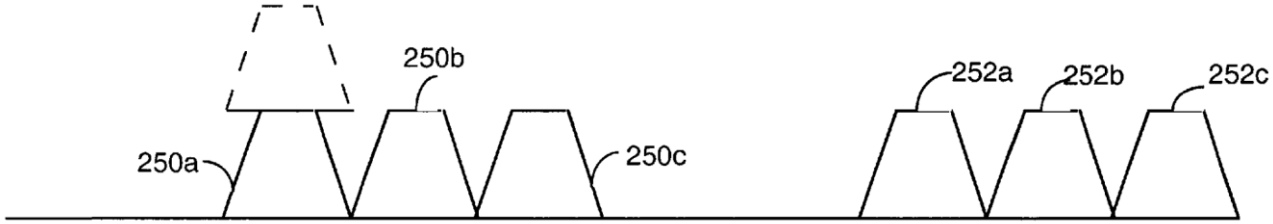


FIG. 6

See, e.g., Chen-868 at Figure 6.

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
	FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention. *See, e.g.*, Chen-868 at 3:7-10. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[24.2] a first down-converter circuit having a first input coupled to receive a first up-converted signal, a second input coupled to receive a first demodulation signal having a first RF frequency, and an output, wherein the first down-converter circuit outputs a first down-converted signal on the first down-converter output;	Chen-868 discloses "a first down-converter circuit having a first input coupled to receive a first up-converted signal, a second input coupled to receive a first demodulation signal having a first RF frequency, and an output, wherein the first down-converter circuit outputs a first down-converted signal on the first down-converter output." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station.

Claim 24 of the ’802 Patent	Prior Art Reference – Chen-868
	See, e.g., Chen-868 at Abstract.  FIG. 5 *See, e.g.*, Chen-868 at Figure 5.

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868

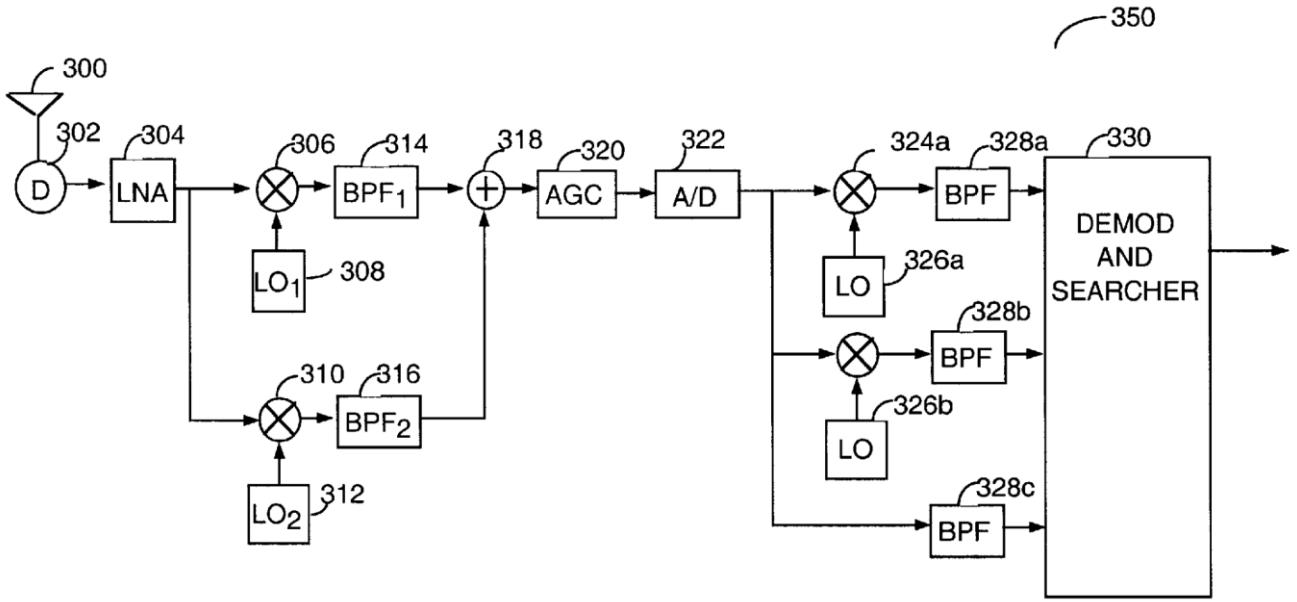


FIG. 6

See, e.g., Chen-868 at Figure 6.

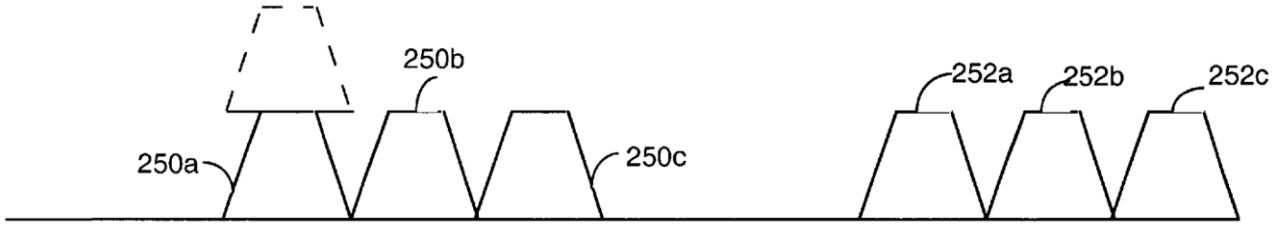
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[24.3] a second down-converter circuit having a first input coupled to receive the	Chen-868 discloses "a second down-converter circuit having a first input coupled to receive the first up-converted signal, a second input coupled to receive a second demodulation signal having a second RF frequency different than the first RF frequency, and an output, wherein the second down-

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
first up-converted signal, a second input coupled to receive a second demodulation signal having a second RF frequency different than the first RF frequency, and an output, wherein the second down-converter outputs a second down-converted signal on the second down-converter output, wherein the first up-converted signal comprises a first signal modulated at the first RF frequency and a second signal modulated at the second RF frequency; and	converter outputs a second down-converted signal on the second down-converter output, wherein the first up-converted signal comprises a first signal modulated at the first RF frequency and a second signal modulated at the second RF frequency." See, e.g.: In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868

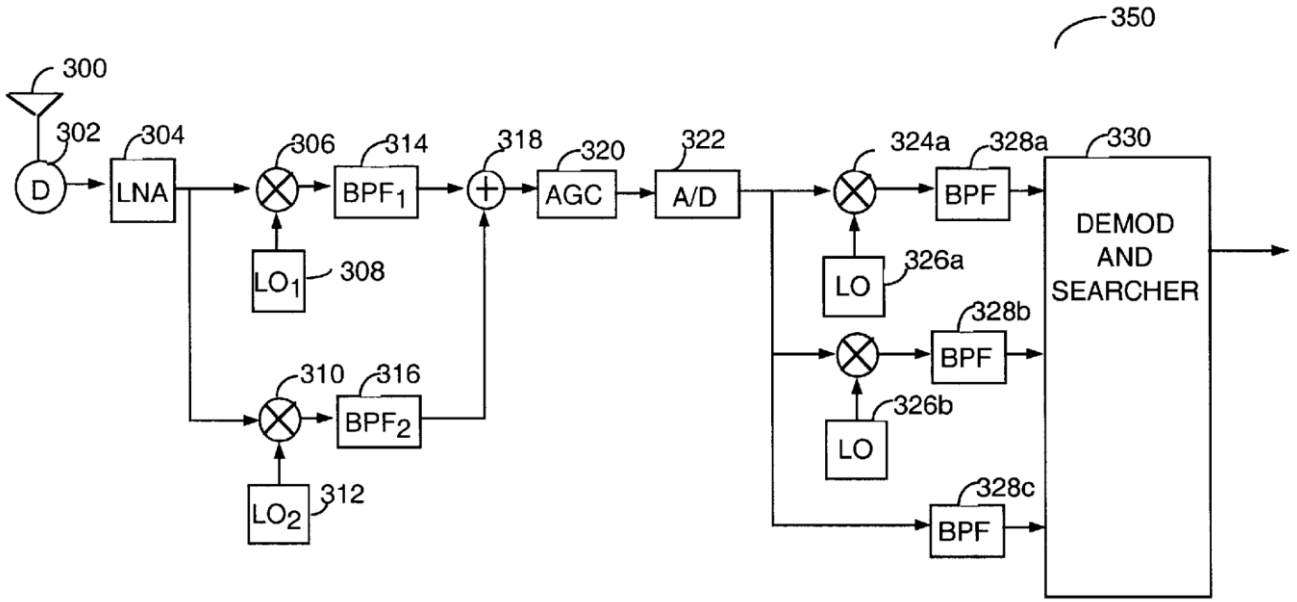


FIG. 6

See, e.g., Chen-868 at Figure 6.

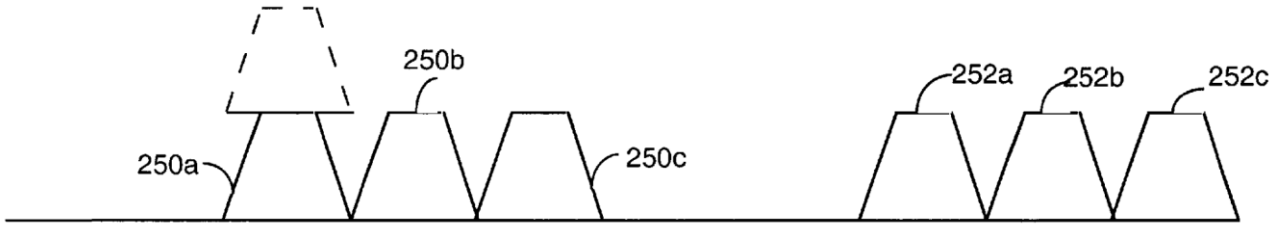
FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.
[24.4] a filter having an input coupled to the output of the first down-converter and the	Chen-868 discloses "a filter having an input coupled to the output of the first down-converter and the output of the second down-converter, and in accordance therewith, the filter receives the first and second down-converted signals." See, e.g.:

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
output of the second down-converter, and in accordance therewith, the filter receives the first and second down-converted signals.	In the present invention, high speed data is provided by transmitting data on multiple carrier frequencies, multiple code channels and/or from multiple base stations. In a first embodiment of the present invention, multiplexed code symbols are transmitted on a plurality of carrier frequencies from the same base station. In second embodiment, code symbols are transmitted on multiple carrier frequencies with at least one corner frequency providing the code symbols is a multiple code channels. In a third embodiment, a subset of the multiplexed code symbols are redundantly provided on a different carrier from at least one additional base station. In a fourth embodiment, multiplexed symbols as transmitted on different carriers from the same base station and are redundantly transmitted on another set of carriers from a different base station. In a fifth embodiment, code symbols are multiplexed onto carriers from a plurality of base stations for increased throughput. In a sixth embodiment, code symbols are transmitted on carriers from a first base station and redundantly provided on at least one additional base station on the same carriers as used by the first base station. *See, e.g.*, Chen-868 at Abstract.  **FIG. 5** *See, e.g.*, Chen-868 at Figure 5.

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868

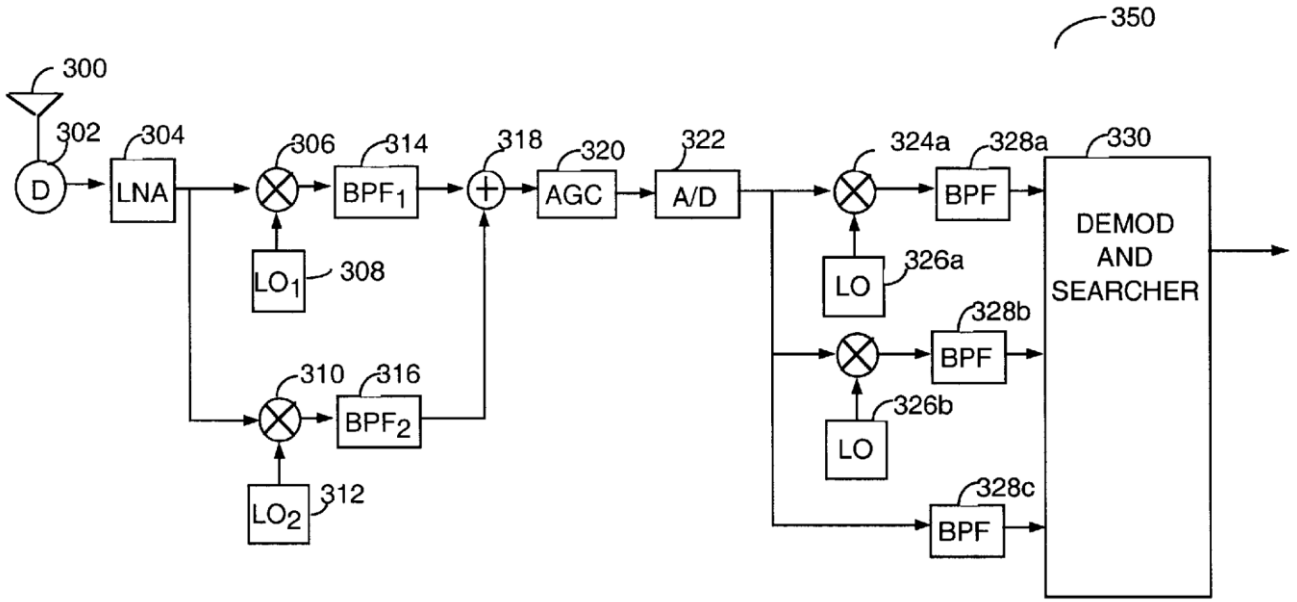


FIG. 6

See, e.g., Chen-868 at Figure 6.

FIG. 6 is a block diagram of a receiver structure which provides for reduced hardware requirement in the reception of signals transmitted in accordance with the present invention.

See, e.g., Chen-868 at 3:7-10.

Referring to FIG. 3B, the data is again provided in three bands, although the present invention is easily extendible to an arbitrary number of bands. The first signal 160 is transmitted on a frequency of 850 MHz, the second signal 162 is transmitted on a frequency of 920 MHz, and the third signal is transmitted on a frequency of 928 MHz. In order to demodulate data transmitted on these three bands, the signals might first be down converted by 800 MHz and then provided to downconverters 110 a-110 j, which would complete the downconversion to a baseband. A first downconverter 104 performs

Claim 24 of the '802 Patent	Prior Art Reference – Chen-868
	a downconversion of 48 MHz to provide a first low frequency signal at 2 MHz. A second downconverter 110 performs a downconversion of 68 MHz to provide a second low frequency signal at 2 MHz. A third downconverter 110 performs a downconversion of 76 MHz to provide a third low frequency signal at 2 MHz. *See, e.g.*, Chen-868 at 4:56-5:4. FIG. 5 illustrates a frequency band allotment of two separate 5 MHz (or 3.75 MHz) bands. The first group of adjacent carriers is illustrated by frequency bands 250 a, 250 b and 250 c. The second group of adjacent carriers is illustrated by carriers 252 a, 252 b and 252 c. The receiver structure illustrated in FIG. 6 is capable of receiving information on the three carriers 250 a, 250 b and 250 c and simultaneously searching or receiving data on one of carriers 252 a, 252 b and 252 c. To illustrate the operation and advantages of the receiver in FIG. 6, it will be assumed that the mobile station in which receiver 350 is located is currently receiving data on carriers 250 a, 250 b and 250 c and that the mobile station will search band 252 a to determine whether it is capable of receiving service from the system providing the signal comprising carriers 252 a, 252 b and 252 c. It will be understood by one skilled in the art that data for the mobile station could be provided on carriers 252 a, 252 b or 252 c by simply changing the searching operation to a demodulation operation. Signals 250 a, 250 b, 250 c and 252 a are received at antenna 300 and provided through duplexer 302 to low noise amplifier (LNA) 304. The amplified signal is provided to mixer 306. Mixer 306 down converts the signal in accordance with a signal provided by local oscillator 308 which brings the 5 MHz band consisting of carriers 250 a, 250 b and 250 c down to a MHz wide baseband signal. The down converted signal is low pass filtered by filter (BPF1) 314 which is a low pass filter with a 5 MHz pass band. The received signal is also provided to downconverter 310 which brings the signal carried on carrier 252 a down to base band. The down converted signal is low pass filtered by filter (BPF2) 316 which is a low pass filter with a 1.23 MHz pass band. The filtered signal from filter 314 is summed with the filtered signal from filter 316 in summer 318. The summed signal is amplified by automatic gain control (AGC) 320. The amplified signal is

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	provided to analog to digital (A/D) converter 322. The digital signals are provided to downconverters 324 a, 324 b and filter (BPF) 328 c. Downconverters 324 a and 324 b bring the signals carried on carriers 250 b and 250 c down to base band. The signal carried on carriers 250 a and 252 a are already at baseband and is provided directly to filter 328 c. The signals 250 a and 252 a act as interference to one another in the demodulation process but given sufficient coding and spreading gain, both the signals can be demodulated. In the present context of searching, it more often than not be the case that no signal is found and in that case the signal degradation will be minimum. Downconverter 324 a and downconverter 324 b are driven by local oscillators 326 a and 326 b respectively. The down converted signals are provided to filters 328 a and 328 b, which are low pass filters with a 1.228 MHz pass band. Similarly, filter 328 c is a low pass filter with a 1.228 MHz pass band. The base band signals are then provided to demodulator and searcher 330 which operate as described with respect to demodulator and searcher 116 of FIG. 2. The signal provided through filter 328 c can be demodulated by two demodulators, one to demodulate the signal transmitted from the first system (on carrier 250 a) and one to demodulate the signal transmitted by the second system (on carrier 252 a). In the alternative, a single demodulator can be time shared demodulating the signal from the first system and at certain intervals demodulating the signal transmitted from the second system. *See, e.g.*, Chen-868 at 13:41-14:36. Furthermore, this claim element is obvious in light of Chen-868 itself, when combined with any of the other references as charted for this claim element in Exs. A-1–A-31, First Supplemental Ex. A-Obviousness Chart, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and First Supplemental Ex. A-Obviousness Chart.